

# Exhibit 1

**Expert Report of Emre Carr, Ph.D., CFA**

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

In re

CUSTOMS AND TAX ADMINISTRATION  
OF THE KINGDOM OF DENMARK  
(SKATTEFORVALTNINGEN) TAX  
REFUND SCHEME LITIGATION

MASTER DOCKET

18-md-02865 (LAK)

**EXPERT REPORT OF EMRE CARR, PH.D., CFA**

Emre Carr, Ph.D., CFA

December 31, 2021

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**I. INTRODUCTION**

**A. Assignment and Scope**

1. I have been retained by certain Defendants to review trades in Danish securities and associated instruments conducted by certain U.S. pension plans in connection with the above-captioned multidistrict litigation, *In re Customs and Tax Administration of the Kingdom of Denmark (Skatteforvaltningen) Tax Refund Scheme Litigation*, 18-md-02865 (LAK).
2. Counsel has asked me to explain how the pension plans conducted stock trading, hedging through flex futures and forward contracts, and financing through stock lending, and the mechanics of payments related to corporate dividends, among other things.
3. In this report, I provide a tutorial on how securities trading works, and describe transactions by two “Plans” in shares of two Danish companies and related hedging transactions (hereinafter the “Analyzed Transactions”) conducted through custodians Solo Capital Partners LLP (“Solo Capital”) and Old Park Lane Capital Limited (“Old Park Lane”), respectively.
4. The Analyzed Transactions are: (i) a March 2013 purchase of A.P. Moller-Maersk class B stock (“MAERSKB”) by RJM Capital Pension Plan (the “RJM Plan”); and (ii) a November 2014 purchase of Chr. Hansen stock by The Proper Pacific LLC 401(k) Plan Pension Plan (the “Proper Pacific Plan”), as well as related transactions.

**B. Expert Qualifications**

5. I am a Senior Managing Director in the Forensic and Litigation Services Practice at FTI Consulting, Inc. (“FTI”). FTI is a multi-disciplined consulting firm that provides a variety of financial advisory services to corporate clients in the U.S. and abroad. The Forensic and Litigation Services Practice specializes in providing financial, accounting, economic, and investigative consulting services to clients.

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6. I have consulted in engagements that involve public and private companies, investment companies, banks, securities and commodities brokers and dealers, and insurance companies in the U.S. and elsewhere. The subjects of these engagements have included financial regulations, structured finance, securities and commodities trading, clearing and execution, securities lending, derivatives transactions, investment advisory services, corporate internal controls, corporate governance, and valuation.
7. Previously, I was a Senior Financial Economist at the Division of Risk, Strategy, and Financial Innovation (“RiskFin”) of the U.S. Securities and Exchange Commission (“SEC”), later renamed the Division of Economic and Risk Analysis. RiskFin was created as the agency’s “think tank” to provide sophisticated, interdisciplinary analysis and economic advice across the entire spectrum of SEC activities, including policymaking, rulemaking, enforcement, and examinations. As a Senior Financial Economist, I conducted economic analyses for the design of SEC rules to govern securities offerings; security-based swaps clearing, execution, and reporting; cross-border application of security-based swap regulations; asset-backed securities issuance and reporting; beneficial ownership reporting; central counterparties; possible adoption of the international financial reporting standards in the U.S.; restrictions on proprietary trading by commercial banks; and required disclosures of off-balance sheet exposures and liquidity. I have statistically analyzed over-the-counter derivatives activities of security-based swap dealers, and banks’ securitization of financial assets to inform the rulemaking.
8. While at SEC, I have participated in enforcement investigations and compliance inspections related to equities, fixed income securities, swaps, other derivatives, and structured financial products. The subjects of these investigations included global banks headquartered in the U.S., Canada, and Europe, insurance companies, broker-dealers, and investment firms.
9. I have consulted in several engagements that involved risk and liquidity management, customer cash handling, trading supervision at securities and

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commodities broker-dealers, structured finance activities, regulatory domicile analysis of equity, fixed income and swap transactions around the globe, corporate internal controls, and valuations of investment entities. Some of these engagements involved assessing the performance of regulators in their own activities.

10. I have taught graduate-level courses on financial statement analysis for valuation and credit decisions, corporate finance, and accounting at the University of Maryland, Columbia University, the University of Southern California, the University of Toronto, and Northwestern University.
11. I earned my Ph.D. degree in Accounting Information and Management at the Kellogg School of Management at Northwestern University. My Ph.D. dissertation examined the use of structured finance transactions for regulatory capital management in banking. In addition, I completed all coursework except the dissertation for the Ph.D. degree in finance.
12. I earned my MBA degree with a concentration in finance from the University of Southern California. I am a CFA® charterholder, granted by the CFA Institute.<sup>1</sup> CFA Institute is the premier global association for investment management professionals and represents the industry gold standard for effective and ethical investment management practices.<sup>2</sup>
13. My curriculum vitae, including a list of all publications authored in the past ten years and the cases in which I have testified as an expert at deposition or at trial during the previous four years, are attached as **Exhibit 1**.
14. FTI is being compensated for my services in this action at an hourly rate of \$1,015. Neither I nor FTI has any financial interest in the outcome of this litigation, nor does our compensation depend in any way on the content of the opinions set forth in this

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<sup>1</sup> CFA refers to Chartered Financial Analyst and is a registered trademark of CFA Institute.

<sup>2</sup> CFA Institute, "CFA Institute Programs," *available at* <https://www.cfainstitute.org/en/programs> (last accessed on December 17, 2021).



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report. In addition, under my direction, FTI staff performed research and other tasks for me in this action.

**C. Information Relied Upon**

15. In performing my analyses and in forming my opinions and conclusions, I have relied upon data and information from various sources, all of which are reasonably relied upon by experts in my field. **Exhibit 2** lists the materials that I have considered or relied upon in forming my opinions in this action. The documents that I rely upon include documents cited in this report and its exhibits. I have also relied upon my professional experience and expertise obtained over many years as a professional economist. I am prepared to amend and expand my analyses if I consider it necessary after receiving further information regarding this action.
16. Regarding any anticipated trial testimony in this action, I may use various documents produced in this litigation that refer to or relate to the matters discussed in this report. Although I may cite to a particular page or pages of documents in this report, such pinpoint cites are provided for clarification purposes only, and other portions of the documents and depositions cited may be relevant for my analyses in this matter. In addition, citations to a document or documents are intended to be illustrative and are not exhaustive. Further, I may create or assist in the creation of certain demonstrative schedules to assist me in testifying. To date, I have yet to create such demonstratives.

**D. Summary of Opinions**

17. As discussed in more detail throughout this report, my opinions include the following:
  - a. The Analyzed Transactions that I discuss in detail in this report are an example of dividend arbitrage strategies.
  - b. Dividend arbitrage strategies are neither new nor unique examples of how tax incentives influence financial decisions and investment strategies. Academic research has shown that investors in numerous countries have engaged in dividend arbitrage.

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- c. As discussed below, when the Plans' orders to purchase shares of the relevant stock were executed, the economic risk associated with holding shares in those stocks was instantly transferred from the seller of the shares to the buyer even though clearing and settlement did not happen that day. Because the Plans purchased the shares prior to what is known as the "ex-dividend" date for the stock, the Plans paid a "cum-dividend" price, meaning that the purchaser had an economic claim to the forthcoming dividend amount. The purchases were reflected on confirmations and statements provided to the Plans.
- d. Records at a central securities depository such as VP Securities in Denmark are unlikely to reflect the name of all the investors that have economic exposure to a security for a variety of reasons, including the time it takes for the central securities depository to record a transfer of ownership after a stock trade has occurred, the presence of intermediaries in the chain of ownership between investors and their securities holdings, the use of omnibus accounts at custodians, and the practice of securities lending. Investors only have visibility into their account holdings at the custodian closest to them; they do not have visibility into the CSD or other intermediaries in the custody chain.
- e. Derivative instruments like flex futures and forward contracts used in the Analyzed Transactions for hedging price risk are distinct from stock. Entering a derivative position (*e.g.*, flex futures) tied to the value of a stock does not alter the underlying long position in that stock. Derivative instruments are commonly used to hedge price risk.
- f. Securities lending is a common practice in the market and is widely understood to promote market efficiency and liquidity. The party that lends out security holdings maintains its economic exposure to the securities. Investors sometimes use securities lending for financing, and, in economic substance, a securities lending transaction is effectively a loan collateralized by the shares when used for financing purposes.

**II. OVERVIEW OF THE PENSION PLAN STRATEGY**

- 18. This case involves the use of a tax-advantaged trading strategy (referred to as "the Pension Plan Strategy") that aimed to generate profits from market participants' tax differentials on dividends while managing the price risk of the underlying shares. The Pension Plan Strategy is a type of dividend arbitrage strategy.

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19. The Analyzed Transactions,<sup>3</sup> involve among other things, trading in stocks of two Danish Companies:<sup>4</sup>
  - a. A.P. Moller-Maersk A/S; and
  - b. Chr. Hansen Holding.
20. The company A.P. Moller-Maersk, a large Danish company, “is an integrated container logistics company and member of the A.P. Moller Group.”<sup>5</sup> By 2020, the company had 80,000 employees in over 130 countries and had revenues of \$39.74 billion.<sup>6</sup> As of 2013 (*i.e.*, the year in which the RJM Plan traded in class B shares of A.P. Moller-Maersk A/S<sup>7</sup>), the company had annual revenues of DKK 266,236

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<sup>3</sup> I have been provided with documents related to trades in several other Danish stocks and, from an economic perspective, the trades in those stocks also seem to have followed the Pension Fund Strategy described in this report. I provide list of all these documents in **Exhibit 2**.

<sup>4</sup> MPSKAT00077418-9; MPSKAT00085289; PROPPACIF00001327; PROPPACIF00001396.

<sup>5</sup> See A.P. Moller - Maersk, “About A.P. Moller – Maersk,” *available at* <https://www.maersk.com/about> (last accessed on December 27, 2021), describing the company as “Connecting and simplifying trade to help our customers grow and thrive. With a dedicated team of over 80,000, operating in 130 countries; we go all the way to enable global trade for a growing world.”

See also Bloomberg, L.P. company description (screenshot provided at **Exhibit 3**) describing that the company “operated as an integrated transport and logistics company” and “offers container vessels, supply ships, special vessels, terminals, tugboat activities and reefer container box manufacturing” for worldwide clients.

I access the Bloomberg database through a Bloomberg terminal. Bloomberg describes the terminal as: “Sitting on the desks of 325,000 of the world’s most influential decision makers, the Bloomberg Terminal is a modern icon of financial markets. Launched in 1981, long before PCs and the internet became ubiquitous, the Bloomberg Terminal brought transparency to financial markets. It connected market participants to a groundbreaking data, analytics and information-delivery service — and revolutionized an industry.” Bloomberg L.P., “The Terminal: Bloomberg Professional Services,” *available at* <https://www.bloomberg.com/professional/solution/bloomberg-terminal/> (last accessed on December 27, 2021).

<sup>6</sup> A.P. Moller - Maersk Annual Report 2020 (*available at* <https://www.maersk.com/year-in-review-2020> (last accessed on December 27, 2021), p. 4.

<sup>7</sup> The RJM Plan traded in both class A and class B shares issued by A.P. Moller-Maersk A/S. Only the trades in class B shares are reviewed in the Analyzed Transactions. The dividend per share was same for both the class of shares. **Exhibit 4** (Bloomberg, L.P. screenshot).

Class A shares have voting rights whereas class B shares do not. A.P. Moller-Maersk A/S Annual Report 2013, p. 66 (“The total share capital of DKK 4,395.6m consists of 4,395,600 shares equally split between A and B shares.”), *available at* <https://investor.maersk.com/static-files/f9126c88-9da0-4b11-8960-a70056e5b5d8>. (last accessed on December 27, 2021)

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million (about \$49 billion), and had 2.198 million shares outstanding for its class B shares.<sup>8</sup>

21. The company Chr. Hansen Holding A/S, another large Danish company, is “a global, differentiated bioscience company that develops natural ingredient solutions for the food, nutritional, pharmaceutical and agricultural industries.”<sup>9</sup> “For four consecutive years (2018 – 2021) Chr. Hansen has been listed on Corporate Knights’ list of the Global 100 Most Sustainable Corporations.”<sup>10</sup> During 2020-2021, Chr. Hansen had revenue of EUR 1.077 billion.<sup>11</sup> As of 2014 (*i.e.*, the year in which Proper Pacific Plan traded in shares of Chr. Hansen Holding), the company had revenues of EUR 756.2 million, and had 131,125,177 shares outstanding.<sup>12</sup>
22. As discussed in detail in §VIII, both Analyzed Transactions involved four general steps on behalf of the relevant investor.
23. *First*, prior to both what is referred to as the issuer’s “ex-dividend date”<sup>13</sup> and the issuer’s “record date,”<sup>14</sup> the Plans purchased shares of a dividend-paying stock, thereby obtaining immediate economic exposure to fluctuations in the stock’s value and a claim to an amount equal to the forthcoming dividend.

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<sup>8</sup> Revenue from A.P Moller-Maersk A/S 2013 Annual Report, p. 4. Shares outstanding remained constant throughout 2013. **Exhibit 5** (Bloomberg, L.P. screenshot). Revenue converted to USD using an exchange rate of 0.1842 USD per DKK, as of December 31, 2013 from Bloomberg, L.P. **Exhibit 6** (Bloomberg, L.P. screenshot).

<sup>9</sup> Chr. Hansen, “About Us,” *available at* <https://www.chr-hansen.com/en/about-us> (last accessed on December 28, 2021); **Exhibit 7** (Bloomberg L.P. screenshot) describing Chr. Hansen as a company that “develops and produces natural ingredients such as cultures, enzymes, probiotics, and natural colors” and “offers products for the food, nutritional, pharmaceutical, and agricultural industries.”

<sup>10</sup> Chr. Hansen, “About Us,” *available at* <https://www.chr-hansen.com/en/about-us> (last accessed on December 28, 2021).

<sup>11</sup> Chr. Hansen Annual Report, 2020/21, p. 8, *available at* <https://www.chr-hansen.com/en/investors/reports-and-presentations> (last accessed on December 28, 2021).

<sup>12</sup> Chr. Hansen’s 2013/2014 Annual Report, pp. 4, 73, *available at* <https://www.chr-hansen.com/en/investors/reports-and-presentations/archive> (last accessed on December 28, 2021).

<sup>13</sup> The ex-dividend date is the date as of which purchasers of stock do not have a claim to the forthcoming dividend declared at the issuer’s most recent Annual General Meeting. This is discussed in more detail in §VI.

<sup>14</sup> The record date is the date that the issuer checks its stock record to identify shareholders to which it will direct the dividend declared at the issuer’s most recent Annual General Meeting. This is discussed in more detail in §VI.

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24. *Second*, on the same day as the stock purchase date, the Plans entered either “flex futures” or “forward” contracts to sell the same number of shares of the same stock at a later date. The contracts provided protection against price fluctuations in the relevant shares.<sup>15</sup>
25. *Third*, the Plans financed the share purchase by lending out those shares in exchange for a fee and cash collateral. The start date of the loan term (*i.e.*, the date on which the Plans received cash collateral in exchange for the underlying securities) occurred after the stock issuer’s “record date.”
26. *Fourth*, also after the record date, the Plans “unwound” each piece of the overall transaction, *i.e.*, recalled the lent shares, sold the shares, and reversed the flex futures or forward contracts by entering the opposite contracts.<sup>16</sup>

**III. HOW STOCK TRADING WORKS**

27. When investors purchase or sell shares of a stock, there are three related processes: (i) trade execution, which is followed by the post-trade execution processes of (ii) clearance; and (iii) settlement. Each of these steps is described below.
28. A purchase or sale of shares does not involve the transfer of physical certificates of the traded stock when the stock certificates have been dematerialized. For example, in Denmark, almost all securities are dematerialized, and this was the case for the shares traded in the Analyzed Transactions.<sup>17</sup>

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<sup>15</sup> Flex futures and forward contracts are agreements to buy or sell a security or a commodity at a specified price on a future date. The contracts are distinct products from shares and are commonly known as derivatives as their value depends on the related shares. I discuss the details of these contracts in §IV of this report.

<sup>16</sup> Investors can exit these contracts before the maturity date by entering into the opposite position (*i.e.*, buy for sell or *vice versa*) on contracts with the same specifications. I discuss this in more detail in §IV.B.

<sup>17</sup> See, e.g., RBC Investor & Treasury Services, “Market Profiles: Denmark,” available at <https://www.rbcits.com/en/gmi/global-custody/market-profiles/market.page?dcr=templatedata/globalcustody/marketprofiles/data/denmark> (last accessed on December 17, 2021) (“Nearly all listed securities are in book-entry form and generally denominated in DKK. The listed securities cover shares, bonds, money markets instruments, futures, options and mutual funds.”)

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29. In the case of dematerialized shares, security holdings and related transfers are tracked through what is commonly called “book entry.”<sup>18</sup> Book entry is a method of tracking transfers and ownership of securities where no physical security is given to investors. The importance of book entry for security transactions and ownership is generally recognized in law.<sup>19</sup>
30. In fact, brokers use book entries to keep track of all activity and holdings in their clients’ accounts, including total holdings in a given security, details of collateral assets, cash, and cash equivalents.<sup>20</sup>
31. My discussion of the Analyzed Transactions is based on, among other things, my review of book entries reflected in the statements received by the Plans.

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<sup>18</sup> The book entry following a new trade execution occurs on the trade date because the economic exposure of an investor starts as soon as the trade is executed. *See, e.g.*, Francotte, Pierre, “Chapter 10: Clearing and Settlement of Book-Entry Securities Transactions,” International Monetary Fund, Current Developments in Monetary and Financial Law, Vol. 1, 1999, pp. 271-289, p. 275 (stating “all transfers take place through movements in the accounts of the seller and the buyer of the securities (or more generally of the transferor and the recipient, since the underlying transaction need not be a sale, but could be a pledge or any other form of transfer). This is called a ‘book-entry’ transfer of securities.”).

<sup>19</sup> For example, the Danish central securities depository, VP Securities, uses book entry to track securities on its system. *See generally* Euronext Securities, “VP Rule Book, Book Entry Rules,” 11 October 2021, *available at* <https://www.vp.dk/Legal-Framework/VP-Rulebook> (last accessed December 29, 2021).

As another example, Uniform Commercial Code § 8-501(b) says that “a person acquires a security entitlement if a securities intermediary: (1) indicates by book entry that a financial asset has been credited to the person’s securities account.” And subsection (c) says that as long as a “condition of subsection (b) has been met, a person has a security entitlement even though the securities intermediary does not itself hold the financial asset.”

<sup>20</sup> *See* Fidelity, “About Statements,” *available at* [https://www.fidelity.com/webcontent/ap002390-mlo-content/19.09/help/learn\\_portfolio\\_statements.shtml#accountrecords](https://www.fidelity.com/webcontent/ap002390-mlo-content/19.09/help/learn_portfolio_statements.shtml#accountrecords) (last accessed on December 17, 2021) (“Statements on single accounts show: ... income summary, contributions and distributions, realized gain and loss from sales, holdings, and transaction details for the time period covered by the report ...”); *see also* Nordea, “Book-entry Account and Securities Custody,” *available at* <https://www.nordea.fi/en/personal/our-services/savings-investments/investments/book-entry-account.html> (last accessed on December 29, 2021) (“When you buy equities or other securities, you don’t receive any traditional printed certificates but your holdings are recorded in the book-entry account instead. In other words, you need to open a book-entry account to store these electronic holdings and to use our trading service.”). Nordea is “a leading Nordic universal bank. At the end of 2020 [the bank] had a total operating income of EUR 8.5bn.” *available at* Nordea, “Who We Are,” *available at* <https://www.nordea.com/en/about-us/who-we-are> (last accessed on December 29, 2021).

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32. First, an investor places an order to buy (or sell) shares of an issuer through an executing broker. The broker then seeks to execute the trade consistent with the investor's instructions. In addition to specifying the security identifier or symbol, the side (*e.g.*, buy or sell), and the number of shares to be traded, an investor may also specify the price at which they are willing to trade, how long the order is in force (*e.g.*, the day, good until canceled), and other special instructions (*e.g.*, settlement date).<sup>21</sup> Trade execution happens when a seller agrees to sell and a buyer agrees to buy a security in a specified quantity at a specified price.
33. Executing brokers have multiple options for executing customer trades. For example, a broker can elect to take the opposite side of the trade and book the trade to its own proprietary account, seek liquidity from another party in the market, or a combination of the two.<sup>22</sup> A trade may be executed on a stock exchange (*e.g.*, Copenhagen Exchange in Denmark operated by Nasdaq Nordic),<sup>23</sup> in an alternative trading venue (*e.g.*, multilateral trading facilities in Europe),<sup>24</sup> or through bilateral

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<sup>21</sup> See, *e.g.*, Fidelity, "Trading FAQs: Order Types," *available at* <https://www.fidelity.com/trading/faqs-order-types> (last accessed on December 17, 2021), explaining several different types of orders an investor can place.

<sup>22</sup> See U.S. Securities and Exchange Commission, "Executing an Order," *available at* <https://www.investor.gov/introduction-investing/investing-basics/how-stock-markets-work/executing-order> (last accessed on December 28, 2021) ("Just as you have a choice of brokers, your broker generally has a choice of markets to execute your trade.").

<sup>23</sup> NASDAQ, "Nordic Equities," *available at* <https://www.nasdaq.com/solutions/nordic-equities> (last accessed on December 21, 2021) ("Nasdaq Nordic operates the exchanges in Sweden, Denmark, Finland and Iceland.").

<sup>24</sup> In Europe, alternative trading venues are called multilateral trading facilities ("MTF"). In the U.S., they are called Alternative Trading Systems. See Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU Text with EEA relevance, Article 4, 1, (22), *available at* <https://eur-lex.europa.eu/eli/dir/2014/65/oj/eng> (last accessed on December 17, 2021); U.S. Securities and Exchange Commission, "Alternative Trading Systems (ATSS)," *available at* <https://www.investor.gov/introduction-investing/investing-basics/glossary/alternative-trading-systems-atss> (last accessed on December 17, 2021).



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trading facilitated by a network of broker-dealers in what is known as an over-the-counter (“OTC”) market.<sup>25</sup>

34. There are various reasons that an investor seeking to trade a large number of shares (or brokers executing those trades on the investor’s behalf) might prefer to execute the trade in the OTC market.<sup>26</sup>
35. When a stock trade is executed, an investor receives a trade confirmation from the executing broker. The confirmation is evidence that the broker executed the trade and the terms on which it was executed.<sup>27</sup>
36. As soon as a trade is executed, the economic risk associated with holding the underlying shares is instantly transferred from the seller of the shares to the buyer. Suppose that an investor places an order to buy 100 shares of a stock, and the order for those shares is executed at DKK 42.5. Upon the trade’s execution, the investor immediately bears the economic risk of holding those 100 shares and is exposed to any gains (or losses) from price changes from that moment onwards. For example, if the price falls the next day to DKK 32.5, the purchaser, not the seller, bears that loss of DKK 10 per share (DKK 1,000 in the aggregate). This is true, irrespective of the time taken to complete the “background” processes of clearing and settling the trade. That is, the investor’s gains (or losses) are determined relative to the execution price

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<sup>25</sup> “Unlike exchanges, OTC markets have never been a ‘place.’ They are less formal, although often well-organized, networks of trading relationships centered around one or more dealers.” International Monetary Fund, “Markets: Exchange or Over-the-Counter,” *available at* <https://www.imf.org/external/pubs/ft/fandd/basics/markets.htm> (last accessed on December 27, 2021).

<sup>26</sup> *See, e.g.*, The U.S. Financial Industry Regulatory Authority’s (FINRA) discussion of U.S. equity trading, stating “[w]hen an institutional investor is making a large trade (think thousands of shares), they sometimes prefer to do so over the counter” for reason such as anonymity and price stability.” FINRA, “Unraveling the Mystery of Over-the-Counter Trading,” January 4, 2016, *available at* <https://www.finra.org/investors/insights/unraveling-mystery-over-counter-trading> (last accessed on December 28, 2021)

<sup>27</sup> *See, e.g.*, Association for Financial Markets in Europe, “Post Trade Explained -The Role of Post-Trade Services in the Financial Sector,” February 2015, Appendix 2 – Trade Confirmation; *see also* U.S. Securities and Exchange Commission, “Investor Bulletin: How to Read Confirmation Statements,” September 27, 2012, *available at* <https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins-62> (last accessed on December 28, 2021) (explaining “What is a Confirmation Statement?”)



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of DKK 42.5 and not by the stock's price (unknown at the trade execution) at the time of the trade settlement.

37. Investors buying stocks don't need to wait for trades to settle before selling them, and *vice versa*. For example, high-frequency traders ("HFT") buy stocks and sell them almost immediately and trade several times a day.<sup>28</sup>
38. The Analyzed Transactions, which involved stocks listed on the Copenhagen Exchange,<sup>29</sup> were executed OTC by an executing broker.<sup>30</sup> Following the execution, the executing broker provided a trade confirmation that detailed, among other things, the symbol of security traded, whether the trade was a buy or sell, the number of shares traded, and the price at which the trade occurred. The stock trade confirmations for the Plans did not identify the counterparty to the trade (*i.e.*, the seller of the shares).<sup>31</sup>

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<sup>28</sup> See, e.g., Benos, Evangelos and Satchit Sagade, "High-frequency Trading Behaviour and its Impact on Market Quality: Evidence from the UK Equity Market," Working Paper No. 469, December 2012 (last accessed on December 30, 2021), p. ii .noting "Although there is no precise definition of an 'HFT', the term is commonly used to describe firms that use computers to trade at high speeds and who also tend to end the day flat, *i.e.*, carry small or no overnight positions."

<sup>29</sup> Both the stocks (*i.e.*, MAERSKB and Chr. Hansen) were listed on Copenhagen stock exchange. See **Exhibit 8** for the Bloomberg, L.P. screenshot.

Exchange listing means that the companies complied with the listing requirements of the exchange. The prices of the shares were quoted on the exchange and investors could trade the shares on the exchange. See, e.g., U.S. Securities and Exchange Commission, "Listing Standards," *available at* <https://www.investor.gov/introduction-investing/investing-basics/glossary/listing-standards> (last accessed on December 28, 2021) ("Before a company's stock can begin trading on an exchange, the company must meet certain minimum financial and non-financial requirements, or 'initial listing standards.' Initial listing standards generally include a company's total market value and stock price, and the number of publicly traded shares and shareholders of the company. Once listed on an exchange, a company must continue to meet a [*sic*] various financial and non-financial requirements, or 'continued listing standards.' Continued listing standards are similar to initial listing standards, but may include additional requirements. If a company fails to meet these continued listing standards, the exchange may remove or 'delist' the company's stock from the exchange.")

<sup>30</sup> MPSKAT0007750; MPSKAT00085149; MPSKAT00077295; MPSKAT00085222-3; PROPPACIF00001323-4; PROPPACIF00001383-4; PROPPACIF00001317; PROPPACIF00001373.

<sup>31</sup> MPSKAT00077418-9 at MPSKAT00077419; MPSKAT00085289; PROPPACIF00001327; PROPPACIF00001396.

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39. The Plans used separate executing and clearing brokers for the stock trades. Post execution, the executing broker “gave up” the stock trades to a different broker for clearance and settlement pursuant to the parties’ give-up agreement.
40. Under a give-up agreement, an executing broker executes a trade as directed by an investor and “gives up” the trades to the designated clearing broker for various post-execution services (*e.g.*, clearing, settlement, record-keeping, etc.).
41. Give-up arrangements are common.<sup>32</sup> The give-up agreements that the Plans used in the Analyzed Transactions followed the standard industry template.<sup>33</sup>

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<sup>32</sup> For example, their use in connection with trades of equity securities in the U.S has been recognized by FINRA. *See* FINRA, “Trade Reporting Frequently Asked Questions,” *available at* <https://www.finra.org/filing-reporting/market-transparency-reporting/trade-reporting-faq> (last accessed on December 28, 2021) (“A member may agree to allow another member to report and lock-in trades on its behalf to a TRF [Trade Reporting Facility], the ADF [Alternative Display Facility] or the ORF [Over-the-counter Reporting Facility], provided that both parties have executed an agreement to that effect (a ‘give-up agreement’) in the form specified by FINRA (FINRA Transparency Services Uniform Reporting Agreement), and submitted such agreement to the FINRA Facility (or Facilities) to which the ‘give-up’ or ‘on behalf of’ relationship applies.”)

*See also* FIA, “Industry Addresses Inefficiencies in the Give-Up Process,” *Futures Industry*, July/August 2006, p. 30, *available at* [https://secure.fia.org/downloads/fimag/2006/julaug06/jul-aug06\\_giveups.pdf](https://secure.fia.org/downloads/fimag/2006/julaug06/jul-aug06_giveups.pdf) (last accessed on December 17, 2021) (last accessed on December 17, 2021) (“The practice of give-ups—when a customer elects to execute a trade at one firm and clear it at another firm—has become an increasingly common practice in the futures industry over the past 10 years.”)

<sup>33</sup> The give-up agreements followed the FIA template “International Uniform Brokerage Execution Services (“Give-Up”) Agreement: Trader Version 2008” *available at* [https://www.fiadocumentation.org/fia/attachment\\_dw.action?attkey=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQJsWJiCH2WAUTleh6%2BAJHrgdjuJ7MHJju&nav=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQ2r3qtn6CZtU%3D&attdocparam=pB7HEsg%2FZ312Bk8OlUOIH1c%2BY4beLEAektndL8Rf%2Bo%3D&fromContentView=1](https://www.fiadocumentation.org/fia/attachment_dw.action?attkey=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQJsWJiCH2WAUTleh6%2BAJHrgdjuJ7MHJju&nav=FRbANEucS95NMLRN47z%2BeeOgEFCt8EGQ2r3qtn6CZtU%3D&attdocparam=pB7HEsg%2FZ312Bk8OlUOIH1c%2BY4beLEAektndL8Rf%2Bo%3D&fromContentView=1).

The difference between the language in the template and the executed agreement is that the template provides for the possibility of a trader trading on behalf of a customer or multiple customers (*e.g.*, a fund manager doing trading on behalf of one or more pension plan). Solo did not need to use the trader related language because the pension plan (*i.e.*, customer) was directly instructing executing broker. I provide a comparison of the template with the executed give-up agreement as **Exhibit 9**.

I was provided only with the give up agreement that the RJM Plan signed. (MPSKAT00066947-51). The email communications related to the stock sale and purchase by the Proper Pacific Plan suggest that the plan executed a give-up agreement following the same template, *i.e.*, “International Uniform Brokerage Execution Services (“Give-Up”) Agreement: Trader Version 2008.” PROPPACIF00001317; PROPPACIF00001373.

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42. The give-up agreement<sup>34</sup> entered into by the RJM Plan as the customer, Solo Capital as the clearing broker,<sup>35</sup> and FGC Securities LLC<sup>36</sup> as the executing broker provided, among other things, that FGC Securities LLC would:
- a. Execute orders on behalf of the RJM Plan and give up the executed trades to Solo Capital for clearing;<sup>37</sup> and
  - b. Charge “¼ of a basis point on notional” of any stock for its execution services.<sup>38</sup> (This means that if RJM Plan asked FGC to buy or sell the stock with a value of \$1 million, the Plan would pay a \$25 transaction cost.)<sup>39</sup>
43. Order placement, execution, and the give up of the stock purchase executed by the executing broker to the clearing broker are demonstrated by the following example related to MAERSKB stock:
- a. On April 11, 2013, the RJM Plan contacted FGC Securities LLC and requested “liquidity” for a purchase of 10,400 shares of MAERSKB,<sup>40</sup> which in industry jargon means that the RJM Plan wanted FGC Securities to find a counterparty (or combination of counterparties) to sell 10,400 shares of MAERSKB to it. As shown in the email request, the RJM Plan’s order specified the stock’s ISIN (a unique identifier for the

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<sup>34</sup> MPSKAT00066947-51.

<sup>35</sup> *Id.* at MPSKAT00066947.

<sup>36</sup> FGC Securities, *available at* <http://www.fgcsecurities.com> (last accessed on December 19, 2021) (“FGC provides agency-only brokerage services to a broad range of institutional clients. As an independent partnership operating in an increasingly consolidated competitive landscape, FGC strives to set itself apart by providing superior client service and market liquidity.”)

<sup>37</sup> MPSKAT00066947-51 at MPSKAT00066947. The give-up agreement for the RJM Plan allowed Solo Capital to not “accept a trade transmitted to it by Executing Broker.” This is standard language available in the give up agreement template, which states that “[i]n the event that Clearing Broker does not, for any reason, accept a trade transmitted to it by Executing Broker, Clearing Broker shall promptly notify Customer and Executing Broker of such non-acceptance.”

<sup>38</sup> MPSKAT00066947-51 at MPSKAT00066951.

<sup>39</sup> One basis point equals 1/100<sup>th</sup> of 1 percent. Thus, 1 basis point of \$1 million will be \$100, and, therefore, ¼ basis point of \$1 million will be \$25.

<sup>40</sup> MPSKAT00076964.

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security)<sup>41</sup>, the number of shares it wanted to purchase, the price at which it was willing to trade, and indicated that it wanted to purchase the shares that day and settle on April 17, 2013.<sup>42</sup>

- b. In response, FGC Securities LLC confirmed that it had liquidity or a counterparty to the trade and stated that it would “execute upon approval from clearer.”<sup>43</sup> The RJM Plan responded that it would seek approval from Solo Capital.<sup>44</sup>
- c. Next, Solo Capital acknowledged to the RJM Plan that it had received the trade request.<sup>45</sup> In a separate email to the RJM Plan and copying FGC Securities LLC, Solo Capital approved the trade under the give-up agreement and stated that it would perform clearing services post-execution.<sup>46</sup>
- d. FGC Securities LLC sent the RJM Plan a confirmation of the executed stock trade, dated the same day.<sup>47</sup>
- e. After the execution, FGC Securities LLC gave up the trade to Solo Capital for post-trade execution services. These services, discussed below, are operational in nature and generally occur after the trade date. The execution resulted in a book entry reflecting a position in the shares in the Plan’s account at Solo Capital. For example, the RJM Plan’s next monthly statement identified the purchase of 10,400 shares of MAERSKB made on April 11, 2013.<sup>48</sup> Consistent with the trade

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<sup>41</sup> A unique identifier is useful for ensuring the correct security is identified because sometimes a company has multiple classes of shares trading.

<sup>42</sup> MPSKAT00076964.

<sup>43</sup> MPSKAT00077050.

<sup>44</sup> MPSKAT00077088.

<sup>45</sup> MPSKAT00077090.

<sup>46</sup> MPSKAT00077295.

<sup>47</sup> MPSKAT00077418-419 at 419.

<sup>48</sup> JHVM\_0005813-5830 at 5814.

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confirmation, the account statement shows only the RJM Plan's side of the trade, not that of any counterparty.

**B. Post-Stock Trade Execution Clearance and Settlement**

44. Following execution, a trade is cleared and settled. For example, Solo Capital provided clearing, settlement, and custody services for the RJM Plan, and Old Park Lane Capital Limited provided clearing, settlement, and custody services for the Proper Pacific Plan.<sup>49</sup>
45. Clearing refers to the set of steps involved in validating the transaction and preparing executed trades for settlement. Clearing involves, among other things, confirming the details of the transaction between buyers and sellers (*e.g.*, security identifier, side of each party (buy or sell), trade price, trade quantity, and settlement date).<sup>50</sup>
46. After clearing, a trade is settled. Settlement refers to the delivery of securities from the seller to the buyer, and the delivery of cash due, if any, on the transaction from the buyer to the seller.<sup>51</sup>

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<sup>49</sup> I note that both firms were registered with the regulator the Financial Conduct Authority ("FCA") at the time of the Analyzed Transactions, and as such were subject to its handbook of rules and guidance, particularly as it applied to broker-dealers and custodians. *See* FCA, "The Financial Services Register," *available at* <https://register.fca.org.uk/s/firm?id=001b000000NMaQQAAT> and <https://register.fca.org.uk/s/firm?id=001b000000MgBgIAAV> (last accessed December 29, 2021).

<sup>50</sup> *See, e.g.*, Danmarks Nationalbank, "Assessment of the VP Settlement System," March 2012, p.11 noting "Clearing is the process that takes place between trading and settlement. It includes a number of processes such as trade reporting, matching of terms, etc." *available at* [https://www.nationalbanken.dk/en/publications/Documents/2012/04/Assesment%20of%20the%20VP%20settlement%20system\\_2012.pdf](https://www.nationalbanken.dk/en/publications/Documents/2012/04/Assesment%20of%20the%20VP%20settlement%20system_2012.pdf) (last accessed on December 17, 2021).

<sup>51</sup> *See, e.g.*, Danmarks Nationalbank, The VP System, *available at* [https://www.nationalbanken.dk/en/bankingandpayments/securities\\_trade\\_settlement/Pages/The-VP-System.aspx](https://www.nationalbanken.dk/en/bankingandpayments/securities_trade_settlement/Pages/The-VP-System.aspx) (last accessed December 29, 2021) explaining ("A core element of the VP settlement system is the simultaneous exchange of securities and cash, known as Delivery versus Payment (DvP). The DvP principle ensures that a party to a securities transaction does not deliver its part of the transaction without receiving the other part.")

"Furthermore, securities may be transferred free of payment (FOP), which applies to unilateral transfers between VP accounts. However, VP's clearing members make only limited use of this facility as more than 98% of all trades among them are settled on a DvP basis." *See*, Danmarks Nationalbank, "Review of VP Securities Services in relation to Recommendations for Securities Settlement Systems," September 30, 2004, p. 26, *available at* [https://www.finanstilsynet.dk/upload/finanstilsynet/mediafiles/newdoc/rapporter/4/assessment\\_rapport\\_eng.pdf](https://www.finanstilsynet.dk/upload/finanstilsynet/mediafiles/newdoc/rapporter/4/assessment_rapport_eng.pdf) (last accessed on December 17, 2021).

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47. Together, clearing and settlement form a process that ensures that sellers get payment for the sold securities and buyers get delivery of the purchased securities.
48. For trades executed on an exchange, regulators determine a trade's settlement date.<sup>52</sup> Prior to September 17, 2014, trades executed on an EU exchange settled on the third trading day after the trade date, known as "T+3," where T refers to the trade date.<sup>53</sup> As of October 6, 2014, trades executed on an EU exchange settled on the second trading day after the trade date, or T+2.<sup>54</sup>
49. Parties that trade stock OTC (or brokers acting on their behalf) may choose their settlement date, and can choose to settle before, on, or after the settlement date applicable to trades executed on an exchange.<sup>55</sup>
50. The parties' choice of settlement date could be the function of various factors. For example, the purchaser may want a longer settlement time in order to have more time to secure any necessary financing of the trade. In fact, the settlement time can

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<sup>52</sup> See, e.g., U.S. Securities and Exchange Commission, "SEC Adopts T+2 Settlement Cycle for Securities Transactions," available at <https://www.sec.gov/news/press-release/2017-68-0> (last accessed on December 17, 2021).

<sup>53</sup> Danmarks Nationalbank, "Review of VP Securities Services in relation to Recommendations for Securities Settlement Systems," September 30, 2004, p. 11, available at [https://www.finanstilsynet.dk/upload/finansstilsynet/mediafiles/newdoc/rapporter/4/assessment\\_rapport\\_eng.pdf](https://www.finanstilsynet.dk/upload/finansstilsynet/mediafiles/newdoc/rapporter/4/assessment_rapport_eng.pdf) (last accessed on December 17, 2021). See also Danmarks Nationalbank, "Assessment of the V.P. Settlement System," March 2012, p. 12, available at [https://www.nationalbanken.dk/en/publications/Documents/2012/04/Assesment%20of%20the%20VP%20settlement%20system\\_2012.pdf](https://www.nationalbanken.dk/en/publications/Documents/2012/04/Assesment%20of%20the%20VP%20settlement%20system_2012.pdf) (last accessed on December 17, 2021).

<sup>54</sup> International Capital Market Association, "CSDR: Migration to T+2," available at <https://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/market-infrastructure/past-initiatives/csd-migration-to-t-2/> (last accessed on December 17, 2021).

<sup>55</sup> See, e.g., RBC Investor & Treasury Services, "Market Profiles: Denmark," available at <https://www.rbcits.com/en/gmi/global-custody/market-profiles/market.page?dcr=templatedata/globalcustody/marketprofiles/data/denmark> (last accessed on December 17, 2021), listing the "Settlement Cycle" for OTC as "Upon agreement."

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vary quite a bit. In Denmark, a trade can settle the day it is made or up to 365 days post-trade.<sup>56</sup>

51. As noted above, the RJM Plan specified the settlement date for its MAERSKB equity trade to be April 17, 2013, which was four trading days after the trade execution date of April 11, 2013.<sup>57</sup> In the industry jargon, this would be called a T+4 settlement.

52. In sum, the economic claim of the investor to the benefit/risk of the stock it purchased begins on the trade date, and therefore book entry made by the broker showed the trade on the execution date, *e.g.*, April 11, 2013, for the MAERSKB stock trade, and not on the settlement date, and this is reflected in the investor's account.

**C. Custody**

53. "Custody is, in essence, a service consisting in holding (and normally administering) securities on behalf of third parties."<sup>58</sup> A broker providing custody services is called

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<sup>56</sup> VP Securities ("VP"), the Denmark CSD, allows for settlement periods up to 365 days. Danmarks Nationalbank, "Assessment of the V.P. Settlement System," March 2012, p. 12, *available at* [https://www.nationalbanken.dk/en/publications/Documents/2012/04/Assesment%20of%20the%20VP%20settlement%20system\\_2012.pdf](https://www.nationalbanken.dk/en/publications/Documents/2012/04/Assesment%20of%20the%20VP%20settlement%20system_2012.pdf) (last accessed on December 17, 2021). *See also* Danmarks Nationalbank, "Review of VP Securities Services in relation to Recommendations for Securities Settlement Systems," September 30, 2004, p. 11, *available at* [https://www.finanstilsynet.dk/upload/finanstilsynet/mediafiles/newdoc/rapporter/4/assessment\\_rapport\\_eng.pdf](https://www.finanstilsynet.dk/upload/finanstilsynet/mediafiles/newdoc/rapporter/4/assessment_rapport_eng.pdf) (last accessed on December 17, 2021). Danmarks National Bank is an overseer of Denmark payment and settlement systems. (Danmarks Nationalbank, "Assessment of the V.P. Settlement System," March 2012, p. 4).

VP is now owned by Euronext and known as Euronext Securities Copenhagen. *See* Euronext Securities, "Euronext Securities – a New Brand for Euronext CSDs," November 12, 2021, *available at* <https://www.vp.dk/News-and-Insights/News-List/2021/11/Euronext-Securities---a-new-brand-for-Euronext-CSDs> (last accessed on December 17, 2021).

<sup>57</sup> MPSKAT00076964.

<sup>58</sup> Chan, Diana, Fontan, Florence, Rosati, Simonetta, and Russo, Daniela, "The Securities Custody Industry," European Central Bank Occasional Paper Series No. 68, August 2007, p. 4.



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a custodian. “Custodians are first and foremost responsible for safekeeping the assets in their clients’ securities accounts.”<sup>59</sup>

54. As part of this function, custodians “provide their clients with reports about their cash and securities holdings and transactional activities, which can be tailored or customized for specific client purposes, including for monitoring the financial performance of securities and other assets.”<sup>60</sup> These reports may be provided to the clients in hard copy or electronically.
55. With regard to the Analyzed Transactions the RJM Plan and the Proper Pacific Plan custodied their stock holdings at Solo Capital and Old Park Lane, respectively.<sup>61</sup> For example, the MAERSKB stock purchased by the RJM Plan was reflected in its stock holdings on its April 2013 account statement from Solo Capital.<sup>62</sup>
56. The RJM Plan exited (or “unwound”) its position in MAERSKB stock in June 2013, with the sale executed by FGC Securities LLC and cleared by Solo Capital, again according to the give-up agreement between the two.<sup>63</sup>

**D. Central Securities Depository**

57. Securities settlements may involve a CSD, which is an institution that “immobilize[s] securities” and “enable[s] the transfer of title by book-entry,” and may offer other services including “income collection from issuers and distribution

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<sup>59</sup> The Clearing House, “The Custody Services of Banks,” July 2016, pp. 4-5, *available at* [https://www.theclearinghouse.org/-/media/tch/documents/research/articles/2016/07/20160728\\_tch\\_white\\_paper\\_the\\_custody\\_services\\_of\\_banks.pdf](https://www.theclearinghouse.org/-/media/tch/documents/research/articles/2016/07/20160728_tch_white_paper_the_custody_services_of_banks.pdf) (last accessed on December 17, 2021).

<sup>60</sup> *Id.* at 5.

<sup>61</sup> *See, e.g.*, Client Custody Agreement between Solo Capital Partners LLP and RJM Capital Pension Plan, 2013 (MPSKAT00003776-84); Client Custody Agreement between Solo Capital Partners LLP and RJM Capital LLC Pension Plan, 2014 (MPSKAT00104151-72); Old Park Lane Capital Limited Terms and Conditions for Custody Services, October 2015 (PROPPACIF00000784-816); *see also* the April 2013 Solo Capital statement for the RJM Plan showing the MAERSKB stock purchase (JHVM\_0005813-58130 at 5815) and the 2014 Old Park Lane statement for the Proper Pacific Plan showing the Chr. Hansen stock purchase (PROPPACIF00000955-61 at PROPPACIF00000956).

<sup>62</sup> JHVM\_0005813-58130 at 5815.

<sup>63</sup> MPSKAT00085109; MPSKAT00085149; MPSKAT00085175-76; MPSKAT00085178; MPSKAT00085222-3; MPSKAT00085288; MPSKAT00085289.



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to securities holders” and securities lending.<sup>64</sup> CSDs have participants or members that use their services.

58. CSDs typically follow a book-entry system for record-keeping and, therefore, can easily transfer securities between their participants electronically.<sup>65</sup> This allows a dematerialized system (meaning, a system without physical stock certificates) to work and enables custodians that interact with CSDs to maintain custody of their clients’ securities in book-entry format.
59. A CSD may offer multiple types of accounts to its participants for different types of securities holdings. For example, a CSD might offer:
- a. An omnibus account, which is “[a] securities account in which the securities belong to multiple clients of a CSD participant, including or excluding a CSD participant’s own securities,”<sup>66</sup>
  - b. A segregated account, which can:
    - “- Be a fully separate account from the other accounts of the CSD participant or be a subaccount of the CSD participant;*
    - Be opened in the name of a single client or in the name of the CSD participant (who might give the account any denomination it chooses);*
    - Include securities belonging to a single end investor (end investor account) or to multiple end investors (individual client account), depending on whether the single client of the CSD participant is itself holding securities on behalf of others.”<sup>67</sup>*

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<sup>64</sup> Chan, Diana, Fontan, Florence, Rosati, Simonetta, and Russo, Daniela, “The Securities Custody Industry,” European Central Bank Occasional Paper Series No. 68, August 2007, p. 8.

<sup>65</sup> Euronext Securities, “How to Become a Customer,” *available at* <https://www.vp.dk/Legal-Framework/How-To-Become-a-Customer> (last accessed on December 17, 2021) (“As a Danish CSD, VP Securities offers an entire range of services regarding securities such as issuance, shareholder identification and investor services. **And of course we provide our core activity of operating a book-entry system and a securities settlement system.**”) (emphasis added).

<sup>66</sup> European Central Securities Depositories Association, “Account Segregation Practices at European CSDs,” October 13, 2015, pp. 6-8, *available at* [https://ecdsa.eu/wp-content/uploads/2015\\_10\\_13\\_ECSDA\\_Segregation\\_Report.pdf](https://ecdsa.eu/wp-content/uploads/2015_10_13_ECSDA_Segregation_Report.pdf) (last accessed on December 17, 2021).

<sup>67</sup> *Id.*

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60. In the case of VP, foreign custodians holding shares of Danish companies typically use omnibus accounts.<sup>68</sup> These custodians may be either direct participants in VP, with their own omnibus accounts at VP, or indirect participants, where their holdings are reflected in the omnibus account of another custodian. By contrast, segregated or end-investor accounts are the default for domestic investors because “the law foresees the use of end investor accounts as standard practice, requiring financial intermediaries to obtain prior express written consent from end investors in order to hold client assets in an omnibus account.”<sup>69</sup>

**E. U.K Custodians of Danish Securities**

61. As I explained above, the Analyzed Transactions used U.K.-based custodians (specifically, Solo Capital for the RJM Plan and Old Park Lane for the Proper Pacific Plan) that provided settlement and custody services for Danish stocks. Here, I briefly describe some of the features of custodianship in the U.K.
62. In the U.K., domestic investors can have individually segregated accounts or a pooled account in their broker’s name.<sup>70</sup> This is in contrast to the system in Denmark, where there is more transparency around security ownership due to domestic investors typically having individually segregated accounts at VP.
63. For U.K. investors that hold shares in U.K. companies at an account maintained by a U.K. custodian, there are several intermediaries in the custody chain between the investor and the local CSD.<sup>71</sup> For clients of U.K. custodians investing in securities

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<sup>68</sup> IMF, “Denmark: Financial Sector Assessment Program—Detailed Assessment of the Securities Clearance and Settlement Systems,” March 2007, pp. 7-8; Danmarks Nationalbank, “Assessment of VP Securities,” April 2016, p. 15, *available at* [https://www.nationalbanken.dk/en/publications/Documents/2016/03/Assessment\\_of\\_VP\\_securities\\_april\\_2016.pdf](https://www.nationalbanken.dk/en/publications/Documents/2016/03/Assessment_of_VP_securities_april_2016.pdf) (last accessed on December 17, 2021).

<sup>69</sup> European Central Depositories Association, “Account Segregation Practices at European CSDs,” October 13, 2015, p. 14, *available at* [https://ecsda.eu/wp-content/uploads/2015\\_10\\_13\\_ECSDA\\_Segregation\\_Report.pdf](https://ecsda.eu/wp-content/uploads/2015_10_13_ECSDA_Segregation_Report.pdf) (last accessed on December 17, 2021).

<sup>70</sup> Department for Business Innovation & Skills, “Exploring the Intermediated Shareholding Model,” NIS Research Paper Number 261, January 2016, p. 25, *available at* [https://www.uksa.org.uk/sites/default/files/BIS\\_RP261.pdf](https://www.uksa.org.uk/sites/default/files/BIS_RP261.pdf) (last accessed on December 17, 2021).

<sup>71</sup> *Id.* at 92.

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issued by foreign companies, the chain of custody will increase in complexity as it may include additional sub-custodians and will include the foreign CSD (also referred to below as the local CSD, since local to the issuer).<sup>72</sup> Sub-custodians are custody account providers that have accounts with the local CSDs, thereby adding additional links to the chain of custody.<sup>73</sup> A customer's custodian often will maintain an omnibus account with the sub-custodian, and, therefore, for any given security, the omnibus account will show net position across all the custodian's clients covered by the omnibus account. The same is true for a sub-custodian maintaining an omnibus account with a CSD.

64. VP keeps a record of all the shares issued and outstanding in each company. However, records at a CSD like VP are unlikely to accurately reflect all the investors that hold a given security as of a given date. There are several reasons for this, including the time it takes for VP to record a transfer of ownership associated with a stock trade (since that is recorded at VP as of settlement date, not trade date), and the use of sub-custodians and omnibus accounts at VP.<sup>74</sup> For example, Danish stock shares held by a foreign investor that is a customer of a U.K. broker that, in turn, has an account with the JP Morgan affiliate that is a direct participant in VP may appear in VP's records as being held in the name of JP Morgan in its omnibus account at VP.
65. As part of the settlement process, a custodian may need to interact with another custodian to transfer securities. The interaction between two custodians may be through yet another custodian (where both interacting custodians have accounts) or through a CSD, which allows for easy interaction and intermediation among its participants.

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<sup>72</sup> *Id.* at 86, 92.

<sup>73</sup> The Clearing House, "The Custody Services of Banks," July 2016, pp. 13-14, *available at* [https://www.theclearinghouse.org/-/media/tch/documents/research/articles/2016/07/20160728\\_tch\\_white\\_paper\\_the\\_custody\\_services\\_of\\_banks.pdf](https://www.theclearinghouse.org/-/media/tch/documents/research/articles/2016/07/20160728_tch_white_paper_the_custody_services_of_banks.pdf) (last accessed on December 17, 2021).

<sup>74</sup> Another reason is the use of securities lending, where shares are lent from one party to another. This practice is discussed in §V.

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66. The primary role of the custodian closest to a customer is to store the digital records of the customer's asset holdings. Other services offered by the custodian may include investment accounting, performance measurement, asset-liability monitoring, stock lending, derivatives services, and currency hedging.<sup>75</sup>

**IV. HEDGING STOCK POSITIONS VIA FLEX FUTURES AND FORWARD CONTRACTS**

67. In the Analyzed Transactions, on the same day as the stock purchase, the Plans entered into either flex futures (applicable to the RJM Plan) or forward contracts (applicable to the Proper Pacific Plan) that hedged the risk arising from fluctuations in prices of the Danish stocks they purchased.

**A. How Futures and Forwards Hedge Price Risk Of Stock Position**

68. Both flex futures and forwards are contracts widely used by investors and taught in finance textbooks.<sup>76</sup> They are commonly referred to as “derivatives” because their value is derived from the value of the underlying assets. These contracts allow investors to hedge risk, such as the risk from, among other things, the fluctuations in the price of various assets, *e.g.*, price of oil, foreign exchange, stock indices, or a particular stock.<sup>77</sup>
69. Flex futures and forward contracts are both agreements to buy or sell a specified asset (here, Danish stock) at a specified price on a specified future date called the “maturity date” or “at maturity”).<sup>78</sup> Such contracts involve two parties, with one

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<sup>75</sup> Department for Business Innovation & Skills, “Exploring the Intermediated Shareholding Model,” NIS Research Paper Number 261, January 2016, p. 93, *available at* [https://www.uksa.org.uk/sites/default/files/BIS\\_RP261.pdf](https://www.uksa.org.uk/sites/default/files/BIS_RP261.pdf) (last accessed on December 17, 2021).

<sup>76</sup> Hull, John C. “Options, Futures, and Other Derivatives,” Eighth Edition, *Prentice Hall*, 2012 (“Hull”), p.1 (“In the last 30 years, derivatives have become increasingly important in finance. Futures and options are actively traded on many exchanges throughout the world. Many different types of forward contracts, swaps, options, and other derivatives are entered into by financial institutions, fund managers, and corporate treasurers in the over-the counter market.”).

<sup>77</sup> Hull, p. 47. Although not specifically discussed in this report, other derivative products could similarly be used to hedge market risk exposure that the pension plans faced by virtue of taking a long equity position in Danish stocks.

<sup>78</sup> *Id.* at 5.

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party agreeing to buy the asset and the other party agreeing to sell the asset at maturity.<sup>79</sup>

70. It is important to note that instruments like flex futures and forwards are distinct from stock. Entering a derivative position (*e.g.*, flex futures) tied to the value of a stock does not alter the underlying long position in that stock. Thus, when the pension plans entered flex futures or forward contracts to hedge their positions, those contracts did not change the fact that they held the underlying shares.
71. Derivatives like flex futures and forward contracts trade in an OTC market.<sup>80</sup> Flex futures are cleared and settled via BClear, an NYSE Euronext platform discussed in §IV.B below. Forward transactions involve an intermediary to broker the transaction and custody the asset.
72. As I noted above, investors commonly use futures and forwards to hedge a risk they face.<sup>81</sup> For example, an investor buying shares in a stock can eliminate almost all the risk from stock price fluctuations between the acquisition date and the date on which the investor expects to sell the stock through a “short hedge” by entering into flex futures or forward contracts that allow the investor to sell those shares at a pre-determined price in the future and thereby remove the uncertainty about the sale proceeds.<sup>82</sup>
73. To understand how hedging works, I first explain the simple case of a stock that does not pay dividends. The no-arbitrage price<sup>83</sup> of a forward contract on a non-dividend

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<sup>79</sup> *Id.*

<sup>80</sup> *Id.* at 3 (“Not all trading of derivatives is done on exchanges. The over-the-counter market is an important alternative to exchanges and, measured in terms of the total volume of trading, has become much larger than the exchange-traded market.”)

<sup>81</sup> *Id.* at 47 (“Many of the participants in futures [and forward] markets are hedgers. Their aim is to use futures markets to reduce a particular risk that they face.”)

<sup>82</sup> *Id.* at 48 (“[S]hort hedge is a hedge ... that involves a short position in futures contracts. A short hedge is appropriate when the hedger already owns an asset and expects to sell it at some time in the future. For example, a short hedge could be used by a farmer who owns some hogs and knows that they will be ready for sale at the local market in two months.”)

<sup>83</sup> No arbitrage price refers to a price in which neither a flex/futures buyer nor seller can make risk free profit. *See, e.g., id.* at p. 104, §5.4.

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paying stock is the product of the current stock price (represented by  $S_0$ ), and a time value factor “TVF”).

$$F_o = S_o \text{ multiplied by TVF}$$

74. The TVF is the future value of \$1 invested (when the contract is opened) at the applicable interest rate until maturity.<sup>84</sup> Therefore, when a flex futures or forward contract is opened, the TVF is greater than 1 because \$1 will earn some interest until the maturity. For example, if the interest earned is \$0.01, the TVF will be 1.01, and will result in a contract price that is slightly higher than the current price of the underlying stock.<sup>85</sup> When the interest rates are low, as was the case for the Analyzed Transactions, the interest earned is very small and therefore, TVF is almost 1 for the entire life of the contract and can be ignored for practical purposes.
75. Thus, the value of a forward or flex futures contract for Analyzed Transactions at any time was primarily determined by the stock price at the time. In other words, as the stock price went up, the value of the flex futures or forward contracts went up by almost the same amount.
76. In short, if an investor sells a forward contract as a hedge while entering into a long position in the stock, any gain on the stock position will be almost entirely offset by the losses on the forward contract sold to hedge the stock position. For example, consider an investor that buys shares of a non-dividend paying stock and sells forward contracts to hedge the price risk. If the price of the stock increased by \$2, the forward price will also go up almost by \$2.
77. The hedging works similarly for a dividend-paying stock. However, the no-arbitrage price for a flex futures or forward contract for a dividend paying stock opened before an ex-dividend date and with a maturity date after ex-dividend date is calculated differently to account for the fact that the stock holder as of the open date expects to

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<sup>84</sup> *Id.* at p. 104, equation 5.1 for a formula for calculating a TVF.

<sup>85</sup> The difference is known as the basis and prior to maturity, the basis is generally not zero and causes the hedging to be slightly imperfect if the forward/ futures contract is unwound prior to its maturity date. *See, e.g.,* Hull, p. 53, Figure 3.1.

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receive income related to the dividend amount but the contract purchaser does not.<sup>86</sup> Starting with the ex-dividend date, a flex futures or forward contracts will have the no-arbitrage price described earlier (*i.e.*, almost same as the stock price) because an investor buying shares on an ex-dividend date or later typically does not receive any income related to dividends.<sup>87</sup>

**B. Mechanics of Flex Futures and Forwards**

78. Often, when two parties enter into a flex futures or forward contract, no cash changes hand when the contract is opened (*i.e.*, neither the buyer in the contract pays any amount, nor the seller in the contract receives any payment).<sup>88</sup>
79. After the contract opening date, as discussed earlier, the value of the contract changes as the price of the underlying asset (*e.g.*, the stock price) fluctuates.<sup>89</sup>
80. Depending on the change in the market price of the underlying asset on the unwind (or the maturity) date and number of the contracts, one party can incur significant gains or losses when the contract is unwound (or matures).<sup>90</sup>
81. A flex futures contract mitigates the risk of counterparty non-performance by using a clearing house as an intermediary, which “guarantees the performance of the parties to each transaction.”<sup>91</sup> A clearing house facilitates trading only among its members.

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<sup>86</sup> See, *e.g.*, *id.* at 107, equation 5.2 for the situation with no taxes. The formula for the calculation of no arbitrage price for a forward contract under taxes is much more complex. See, *e.g.*, Cornell, Bradford, and Kenneth R. French, “Taxes and the Pricing of Stock Index Futures,” *The Journal of Finance*, 1983, 38(3), pp. 675-694, discussion starting at p. 681.

<sup>87</sup> Sometimes, a company may announce a special dividend payable on or after the ex-dividend date but before the contract maturity. My statement is applicable to the situation when there is no such payment.

<sup>88</sup> Hull, p. 8 noting “it costs nothing to enter into a forward contract.”

<sup>89</sup> A flex futures or forward contract may specify a physical settlement. In that case, on maturity, the seller must deliver the asset (*e.g.*, stock shares) to the buyer and receive payment for the sale at the price agreed upon at the contract’s start.

<sup>90</sup> Investors do not always hold a contract to maturity. For example, an investor entering into a contract that specifies physical delivery of underlying asset on the maturity date may enter into an offsetting contract at an earlier date and unwind their position to avoid having to deliver or take delivery of the asset. See, *e.g.*, Hull, p. 36 noting “To avoid the risk of having to take delivery, an investor with a long position should close out his or her contracts prior to the first notice day.”

<sup>91</sup> Hull, p. 29.



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Therefore, a party wanting to access a clearing house must do so through one of the members.<sup>92</sup>

82. For example, BCclear, an NYSE-Euronext offering, offers intermediary services related to flex futures in Europe.<sup>93</sup> As of June 2014, BCclear was the largest provider of flexible futures products and provided clearing services for, among other things, flexible futures contracts on individual stocks (“flex futures”) for which parties had the ability to negotiate, among other things, exercise price.<sup>94</sup>
83. Like stock trades, the custody services for flex futures sold by the RJM Plan were provided by Solo Capital.<sup>95</sup> Solo Capital accessed BCclear through JP Morgan Chase<sup>96</sup> because “[f]irms wishing to access the [BCclear] system either have to be a

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<sup>92</sup> Hull, p. 29 noting that “[t]he **clearing house has a number of members, who must post funds with the clearing house**. Brokers who are not members themselves must channel their business through a member. The main task of the clearing house is to keep track of all the transactions that take place during a day, so that it can calculate the net position of each of its members.” (emphasis added)

<sup>93</sup> Euronext, “NYSE LIFFE’s BCLEAR Service Registers One Billionth Contract,” March 9, 2011, *available at* <https://www.euronext.com/en/about/media/euronext-press-releases/nyse-liffes-bclear-service-registers-one-billionth-contract> (last accessed on December 17, 2021), noting “Bclear was launched in October 2005 after NYSE Liffe first identified customers’ needs for a flexible platform for the processing of pre-negotiated equity derivatives transactions. The service was designed to bridge the gap between the bilateral, OTC markets and the listed on-exchange markets, **providing traditional users of the OTC markets with the security of trade administration and clearing of a range of options and futures on individual equity and index contracts.**” (emphasis added)

<sup>94</sup> ISDA, “Central Clearing in the Equity Derivatives Market – An ISDA Study,” June 2014, p. 4, *available at* <https://www.isda.org/a/6PDDE/central-clearing-in-the-eqd-market-final.pdf> (last accessed on December 17, 2021), noting “ESMA also states that equity derivatives contracts traded on multilateral trading facilities (MTFs), such as futures and options, are classified as OTC derivatives under EMIR.”

*See also* ISDA, “Central Clearing in the Equity Derivatives Market – An ISDA Study,” June 2014, p. 7, *available at* <https://www.isda.org/a/6PDDE/central-clearing-in-the-eqd-market-final.pdf> (last accessed on December 17, 2021), explaining “Cleared, flexible exchange-like contracts closely resemble exchange-traded products, **except that market participants are able to bilaterally negotiate a limited number of terms, such as contract maturity, exercise price and settlement method.** Once the terms are agreed, the contracts are sent to an exchange or CCP for confirmation, processing and clearing.” (emphasis added)

<sup>95</sup> *See* Client Custody Agreement between Solo Capital Partners LLP and RJM Capital LLC Pension Plan, 2013 (MPSKAT00003776-84); Client Custody Agreement between Solo Capital Partners LLP and RJM Capital LLC Pension Plan, 2014 (MPSKAT00104151-72).

<sup>96</sup> *See* various monthly JP Morgan Chase statements for Solo Capital (SCPADMINISTRATORS\_00041860-2757).



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member firm of LIFFE (Euronext Liffe London) or to have a clearing agreement in place with a member firm.”<sup>97</sup>

84. Unlike flex futures, there is no intermediary involved in a forward contract and, therefore, depending on the stock price on the unwind date, the party with a gain would face credit risk as the counterparty may not honor the obligation to pay the amount required under the contract.
85. Like stock trades, the custody service for the forward contracts sold by the Proper Pacific Plan was provided by Old Park Lane.<sup>98</sup>
86. Below, I describe the flex futures contracts that the RJM Plan and the forward contracts that the Proper Pacific Plan used to hedge the stock price risk in their transactions.
87. In conjunction with the RJM Plan’s April 11, 2013 purchase of 10,400 shares of MAERSKB stock, the Plan also sold, on the same day, flex futures (on MAERSKB) through inter-dealer broker FGC Securities LLC. This sale hedged the price risk of the purchased shares. The steps below illustrate the process the RJM Plan used:
88. On April 11, 2013, the RJM Plan contacted FGC Securities LLC and requested “liquidity” for a sale of 104 contracts of MAERSKB,<sup>99</sup> which, since a “contract” is for 100 shares, represents an agreement to sell 10,400 shares at a future date. As shown in the email request, the RJM Plan’s order specified the contract expiry date,

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<sup>97</sup> IPE, “To Trade ‘On’ or ‘Off’ Exchange?,” January 2006, *available at* <https://www.ipe.com/to-trade-on-or-off-exchange/18537.article> (last accessed on December 27, 2021), also noting “Bclear is perhaps the most important development for fund managers as far as wholesale equity derivatives are concerned. It allows OTC trades to be registered, processed and cleared through LCH.Clearnet Ltd. Users can choose between standard and non-standard maturities and strike prices and they can even design multi-leg structures of combinations of American and European style options, as well as electing for either cash or physical settlement. This provides many of the most important benefits of trading on exchange to OTC players.”

<sup>98</sup> Old Park Lane Capital Limited Terms and Conditions for Custody Services, October 2015 (PROPPACIF00000784-816).

<sup>99</sup> MPSKAT00076965.

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the quantity of contracts it wanted to sell, and indicated that it wanted to trade that day.<sup>100</sup>

89. FGC Securities LLC sent the RJM Plan a confirmation of the executed trade, dated the same day.<sup>101</sup> The trade confirmation from FGC Securities LLC shows “Euronext – BCclear” as the exchange for the flex futures contracts. That is, the flex futures contracts were typical contracts for which BCclear provided the clearing services.<sup>102</sup>
90. Similarly, the trade confirmation from Bastion Capital show that Proper Pacific Plan bought 839,500 shares of Chr. Hansen stock on November 27, 2014.<sup>103</sup> Proper Pacific sold 839,500 forward contracts on the same day,<sup>104</sup> which hedged the price risk of the purchased shares, as reflected in the trade confirmations from Old Park Lane.<sup>105</sup> The process reflected in the documents is described below:
91. On November 27, 2014, the Proper Pacific Plan emailed Amalthea Enterprises Ltd. to propose selling forward contracts for 839,500 shares of Chr. Hansen with an expiry date of March 20, 2015.<sup>106</sup> Though forward contracts did not have an intermediary like BCclear to ensure that parties meet their performance obligations under the contracts, the message noted that Old Park Lane was expected to serve as Guarantor, pending approval.<sup>107</sup>
92. Amalthea Enterprises Ltd. responded that it was “[h]appy to trade at the below levels ... pending custodian approvals.”<sup>108</sup> Old Park Lane responded to the Proper Pacific

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<sup>100</sup> MPSKAT00076965.

<sup>101</sup> MPSKAT00077418-419 at MPSKAT00077418.

<sup>102</sup> MPSKAT00077418-419 at MPSKAT00077418; MPSKAT00085291.

<sup>103</sup> PROPPACIF00001317; PROPPACIF00001326; PROPPACIF00001327.

<sup>104</sup> Unlike flex futures contracts (where each contract covered 100 shares of the underlying stock), each forward contract covered only one share of the underlying stock.

<sup>105</sup> PROPPACIF00001320.

<sup>106</sup> PROPPACIF00001325.

<sup>107</sup> PROPPACIF00001325.

<sup>108</sup> PROPPACIF00001325.

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Plan to acknowledge receipt of the trade proposal.<sup>109</sup> It then sent a message to the Proper Pacific Plan, copying Amalthea Enterprises Ltd, indicating that the trade was “matched” between the two counterparties.<sup>110</sup>

93. As I noted earlier, the parties to forward or flex futures contracts can exit the contracts before the maturity date (as was the case for both Analyzed Transactions<sup>111</sup>) by entering into flex futures or forward contracts with opposite obligations (*i.e.*, enter into contracts to buy stock shares to offset the obligation to buy shares under the prior contracts). That is, the seller in flex futures or forward contracts can enter into new contracts to buy the same number of shares with the same maturity date and same delivery price.
94. For example, after selling forward contracts in November 2014, the Proper Pacific Plan purchased contracts on December 16, 2014 in order to exit the contracts that would have otherwise matured on March 20, 2015.<sup>112</sup>

**V. SECURITIES LENDING**

95. A few days after the trade execution, the pension plans lent the shares that they purchased. The stock loan term in the Analyzed Transactions started on the same day the stock trades settled, which allowed the Plans to lend the stock they purchased and pay for the purchases with the cash collateral they received in return.<sup>113</sup>

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<sup>109</sup> PROPPACIF00001319.

<sup>110</sup> PROPPACIF00001320.

<sup>111</sup> As discussed in §VIII, both the RJM Plan and the Proper Pacific Plan unwound the transaction sometime after the dividend record date and before the maturity of the hedge contracts.

<sup>112</sup> PROPPACIF00001378.

<sup>113</sup> There are multiple ways to finance a security purchase, e.g., a security lending transaction, a repurchase agreement, or a margin loan from your broker. For the Analyzed Transactions, both custodians could also “advance funds” to the plans “to facilitate the settlement of any Transaction relating to Property.” MPSKAT00003776 – 3784 at MPSKAT00003778 and PROPPACIF00000784-816 at PROPPACIF00000786.

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96. Eventually, the pension plans recalled the shares that had been lent and sold shares to exit their stock position in full.

**A. Basic Mechanics of Securities Lending**

97. Securities lending refers to the loan of a security (*e.g.*, stocks, bonds) from one party (the “lender”) to another (the “borrower”). The loan can be bilaterally negotiated between a borrower and a lender or facilitated by a broker-dealer or a dealer bank acting as an intermediary.<sup>114</sup> A loan term (“Loan Term”) refers to the period during which the parties have exchanged securities for collateral.

98. For the Loan Term, the borrower provides collateral to the lender, often in the form of cash. The lender of the securities maintains his economic exposure to the securities.<sup>115</sup> A security loan with cash collateral can be used as a financing mechanism because, from an economic perspective, the transaction is effectively a loan collateralized by the shares.<sup>116</sup>

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*See, e.g.*, SWIFT, “SFTR – The Securities Financing Transactions Regulation,” *available at* <https://www.swift.com/your-needs/capital-markets/sftr> (last accessed on December 28, 2021) (“A Securities Financing Transaction (SFT) is where securities are used to borrow, not unlike a collateralized loan. For instance, repurchase agreements (repos), buy/sell-back transactions and lending. In each of these cases ownership of the securities changes hands in exchange for cash. The SFT concludes when each counterparty receives what they originally possessed, minus (or in addition to) a fee depending on the type of transaction.”)

*See also* European Commission, “Securities Financing Transactions (SFTs),” *available at* [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-markets/post-trade-services/securities-financing-transactions-sfts\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-markets/post-trade-services/securities-financing-transactions-sfts_en) (last accessed on December 28, 2021) “A securities financing transaction can be a repurchase transaction - selling a security and agreeing to repurchase it in the future for the original sum of money plus a return for the use of that money [or] lending a security for a fee in return for a guarantee in the form of financial instruments or cash given by the borrower [or] a buy-sell back transaction or sell-buy back transaction [or] a margin lending transaction.”)

<sup>114</sup> BlackRock, “Securities Lending: The Facts,” May 2015, p. 1.

<sup>115</sup> Dixon, Peter N., Corbin A. Fox, and Eric K. Kelley, “To Own or Not to Own: Stock Loans Around Dividend Payments,” *Journal of Financial Economics*, 2021, 140(2), pp. 539-559, p. 539 noting “A stock loan decouples ownership from equity exposure. This occurs because while securities lending agreements transfer the legal right to receive dividends and any tax liability thereof from the lender to the borrower, the borrower must reimburse the lender any dividend payments that occur during the life of the loan and return the shares upon recall.”

<sup>116</sup> *See, e.g.*, Fidelity, “What is the Fully Paid Lending Program?,” *available at* <https://www.fidelity.com/trading/fully-paid-lending> (last accessed on December 28, 2021), explaining that an investor remains “exposed to the market while ... securities are on loan” and can sell the shares anytime.

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99. The borrower may sell or further lend out the shares during the Loan Term but must return the same number of shares of the same kind to the lender either at a date determined at the start of the loan or, more typically, when either party decides to end the loan.
100. The lender may use the collateral, including spending the cash collateral, during the term of the loan but must return the collateral to the borrower at a date determined at the start of the loan or, more typically, when either party decides to end the loan.
101. Securities lending transactions are commonly done pursuant to industry-standard agreements like the Global Master Securities Lending Agreement (“GMSLA”). The GMSLA, discussed in more detail below, is a template agreement that borrowers and lenders can modify to suit their needs.
102. Securities lending is widespread and extensive. As of June 30, 2015, the value of securities on loan exceeded EUR 1.8 trillion globally.<sup>117</sup> The value of securities lent in the Analyzed Transactions, at DKK 454,275,009 by the RJM Plan and DKK 217,346,550 by the Proper Pacific Plan, were very small compared to the size of the industry; each transaction value being less than 0.004% of the industry size of about EUR 1.8 trillion.<sup>118</sup>

**B. Securities Lending Promotes Market Efficiency**

103. Securities lending plays several important roles in the securities market and is widely understood to promote market efficiency and liquidity.<sup>119</sup>

*Securities lending provides **liquidity** to the equity, bond and money markets, placing it at the heart of today’s financial system. This increase in liquidity reduces the cost of trading, thereby increasing*

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<sup>117</sup> International Securities Lending Association, “ISLA Securities Lending Market Report, September 2015,” p. 6.

<sup>118</sup> The DKK amounts were converted to EUR at an assumed rate of 1 EUR per 7.4604 DKK (as of June 30, 2015, **Exhibit 10** (Bloomberg, L.P. screenshot)), for loans of EUR 60,891,508 and EUR 29,133,364.

<sup>119</sup> An efficient market is one in which prices reflect all publicly available information. *See, e.g.,* Fama, Eugene, “Efficient Capital Markets: A Review of Theory and Empirical Work,” *Journal of Finance*, 1970, 25(2), pp. 383-417. Security lending promotes market efficiency because it allows investors with a contrarian view of the current stock price to influence the stock price by borrowing the stock and selling it (*i.e.*, short selling).

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*market efficiency and benefiting all. Securities lending markets allow market participants to sell securities that they do not own in the confidence that they can be **borrowed prior to settlement**. They are also **used for financing**, through the lending of securities against cash, forming an important part of the money markets. The ability to lend and borrow securities freely underpins the services that securities dealers offer their customers and the trading strategies of dealers, hedge funds and other asset managers. On the lending side, securities lending forms a growing part of the revenue of institutional investors, custodian banks and the prime brokerage arms of investment banks.*<sup>120</sup>

104. The International Securities Lending Association (“ISLA”), a trade organization, describes the same benefits from securities lending:

*Securities lending plays a fundamental role in today’s global capital markets. It has long been used as a means of meeting settlement and collateral requirements, as well as providing vital liquidity and efficiency to secondary markets. It also promotes price discovery and market making, as well as facilitating important hedging and investment strategies, such as short selling and arbitrage. As of December 2020, total securities on loan was EUR 2.3 trillion, with EUR 24 trillion of securities being made available for securities lending by institutional investors. Many European and other central banks use securities lending as part of their implementation of monetary policy, which helps financial markets function more smoothly.*<sup>121</sup>

105. Regulators, such as the European Securities and Markets Authority (“ESMA”), an independent authority that promotes “stable and orderly financial markets,”<sup>122</sup> have

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<sup>120</sup> Faulkner, Marc C., “An Introduction to Securities Lending,” (Spitalfields Advisors Ltd., 4th ed. 2007), available at <https://www.sasla.co.za/index.php/en/document/27-an-introduction-to-securities-lending-4th-ed/file> (last accessed November 29, 2021). (emphasis added)

<sup>121</sup> ISLA - A&O, “Framing Securities Lending for the Sustainability Era,” March 2021, p. 10, available at <https://www.allenoverly.com/en-gb/global/news-and-insights/publications/framing-securities-lending-for-the-sustainability-era-isla-ao-white-paper> (last accessed on November 29, 2021).

<sup>122</sup> ESMA, “ESMA in Brief,” available at <https://www.esma.europa.eu/about-esma/esma-in-brief> (last accessed on November 28, 2021).

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also noted the efficiency of securities lending.<sup>123</sup> So has the European Central Bank.<sup>124</sup>

106. Security lending helps markets be efficient by allowing arbitrageurs to contribute to price discovery. For example, arbitrageurs can borrow securities they consider overvalued and engaged in activities such as short sales to facilitate efficient price discovery.<sup>125</sup>
107. One recent extreme example of the impact of securities being sold short, facilitated through securities lending, occurred in shares of GameStop. The short interest<sup>126</sup> in GameStop reached a high of 109.26% of outstanding shares in December 2020,<sup>127</sup> and 122.97% of the float (i.e., shares issued to the public and available for investors to trade) in January 2021.<sup>128</sup> This meant that at these peaks, all the long positions added up to 209.26% of the outstanding shares (in December 2020) and 222.97% of the float (in January 2021). In other words, long positions reflected in investor accounts and related statements exceeded the share float and shares outstanding due to short interest.

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<sup>123</sup> ESMA, “Undue Short-Term Pressure on Corporations,” December 18, 2019, *available at* <https://www.esma.europa.eu/document/report-undue-short-term-pressure-corporations-financial-sector> (last accessed on November 29, 2021) (“Furthermore, ESMA has considered the general arguments in relation to the impact of short-selling and securities lending practices and their potential link with short-termism. Nevertheless, ESMA points out that **short-selling and securities lending are key for price discovery and market liquidity**. Moreover, ESMA is not aware of concrete evidence pointing to a cause-effect connection between these practices and the existence of undue short-term market pressures.”) (emphasis added).

<sup>124</sup> See European Central Bank, “What is Securities Lending?,” December 8, 2016, *available at* [https://www.ecb.europa.eu/ecb/educational/explainers/tell-me-more/html/securities\\_lending.en.html](https://www.ecb.europa.eu/ecb/educational/explainers/tell-me-more/html/securities_lending.en.html) (last accessed on November 29, 2021).

<sup>125</sup> A “short sale” occurs when an investor sells securities that it does not have, intending to buy the securities at a later date when (the investor hopes) the price of the security has fallen, thereby yielding a profit. A short sale can be “covered,” meaning that shares are borrowed to effectuate settlement of the sale within the required amount of time, or “naked,” meaning that the seller fails to make delivery within the required time.

<sup>126</sup> Short interest refers to the shares sold short as a proportion of the outstanding shares or the float.

<sup>127</sup> U.S. Securities and Exchange Commission, “SEC Staff Report on Equity and Options Market Structure Conditions in Early 2021,” October 14, 2021, p. 25, *available at* <https://www.sec.gov/files/staff-report-equity-options-market-struction-conditions-early-2021.pdf> (last accessed on November 30, 2021).

<sup>128</sup> *Id.* at 21.



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108. Security lending also facilitates the smooth functioning of markets by increasing the supply of shares around periods of high demand, *e.g.*, dividend record dates.<sup>129</sup>
109. In short, security lending plays an important role in the efficient and smooth functioning of securities markets and “contributes substantially to market quality through its roles in market making, facilitating trade settlement, and short selling.”<sup>130</sup>
110. While securities lending contributes to the efficient functioning of markets, securities lending is, however, another cause of CSDs and other custodians not having accurate records of investors entitled to receive dividends at each point in time.

**C. Stock Loans in The Analyzed Transactions Were Made Pursuant to the GMSLA**

111. Securities lending typically begins with contract templates that the parties can use as a starting point for their negotiations. For cross-border transactions, for example, the GMSLA is the standard template between parties to securities lending transactions.<sup>131</sup> The GMSLA was developed by ISLA; the version developed in 2010 remains in use today.<sup>132</sup> Market participants begin with these standard agreements and negotiate any individualized terms to suit their particular circumstances.

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<sup>129</sup> Dixon, Peter N., Corbin A. Fox, and Eric K. Kelley, “To Own or Not to Own: Stock Loans Around Dividend Payments,” *Journal of Financial Economics*, 2021, 140(2), pp. 539-559, p. 540 (“Although we find a significant reduction in shares available for lending, the quantity of shares on loan and the number of new loan transactions both increase, which indicates the demand effect dominates. The magnitudes are striking. While supply contracts by an average of 10%, **the quantity of shares on loan on dividend record days surpasses its pre-dividend level by more than 20%, and the number of new lending transactions exceeds its average by well over 50%.**”) (emphasis added).

<sup>130</sup> Baklanova, Viktoria, Cecilia Caglio, Frank M. Keane, and R. Burt Porter, “A pilot survey of agent securities lending activity,” OFR WP (2016): 16-08, [“Baklanova et al.”] p. 2 (“Many types of market participants engage in securities lending. It contributes substantially to market quality through its roles in market making, facilitating trade settlement, and short selling. Securities lending increases short-term market liquidity by allowing market makers to increase temporarily the supply of securities available to meet demand for those securities. In these ways, securities lending is vital to smooth market functioning.”)

<sup>131</sup> ISLA, “GMSLA Title Transfer,” *available at* <https://www.islaemea.org/gmsla-title-transfer/> (last accessed on November 29, 2021).

<sup>132</sup> *Id.*



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112. With regard to the Analyzed Transaction, loans were made pursuant to the GMSLA framework entered between the Plans and borrowers and the details of each stock loan were specified in an exchange of emails.<sup>133</sup>
113. In practice, the lending and borrowing parties often use intermediaries such as custodians, broker-dealers, and investment managers to manage the securities lending agreement.
114. A securities lending transaction typically requires, among other things, a specification of the security involved, collateral posted for borrowing securities (*e.g.*, cash as was the case for the Analyzed Transactions<sup>134</sup>), the interest rate payable on cash collateral, if applicable, by the security lender, a security borrowing fee, if any, paid by the stock borrower, and the names of the counterparties. These transaction details are not included in the GMSLA itself, which is a framework agreement; rather the parties agree on terms and condition in connection with each individual stock loan.
115. If the collateral is provided as cash, the amount of cash is often higher than 100% of the value of the securities borrowed and depends on typical practices in the region. For example, it is common to see cash collaterals of 102% of the value of the equity on loan in the U.S., and 105% in Europe.<sup>135</sup> In other words, in Europe, a security lender like the RJM Plan can routinely get cash collateral of 105% of the value of securities lent.
116. In practice, the cash collateral is often negotiated between parties and depends on firm-specific and collateral-specific factors. A study reports that “the 90% of

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<sup>133</sup> The GMSLAs entered between the pension plans and the borrowers in the Analyzed Transactions were substantially similar to the GMSLA master template. I provide a comparison of the template with the executed GMSLA as **Exhibit 11**.

<sup>134</sup> Collateral can also be other securities.

<sup>135</sup> See BNY Mellon, “Resetting the Roadmap: Managing in a New Securities Lending Environment for Beneficial Asset Holders,” Office of Innovation Thought Leadership Series. Third Quarter 2009 noting “Currently acceptable cash collateral levels for equity loans are 102% in the US and **105% in Europe**.” (emphasis added). See also “Securities Lending in Physical Replication ETFs: A Review of Providers’ Practices,” Morningstar ETF Research, August 2012, p. 17 noting cash collateral of 105% for security lending by EasyETF in Europe.

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securities lending transactions [in the U.S.] take place with collateral margins ranging from 100% to 111%.”<sup>136</sup>

117. As I noted earlier, the pension plans effectively used security lending transactions to finance their stock purchases. For example, the RJM Plan lent MAERSKB stock to Colbrook Ltd. with a Loan Term beginning on April 17, 2013.<sup>137</sup> On the same day, the RJM Plan received the collateral of DKK 454,275,008.72 (for 10,400 shares), which equals 100% of the trade value of MAERSKB stock, and used that collateral to make the payment for the shares due that day.<sup>138</sup>

**VI. CORPORATE DIVIDENDS**

118. Dividends are distributions that a company announces for its shareholders.<sup>139</sup> Companies typically announce cash dividends but may also announce stock dividends of additional shares. Companies determine whether to pay a dividend at all. If a company decides to pay dividends, it determines the amount, frequency, and dates of dividend payments. Both of the stocks in the Analyzed Transactions paid dividends once a year.<sup>140</sup>
119. Issuers use information as of the end of the day on “record date” to identify the shareholders that will receive payments in the amount of the dividend. Since, as

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<sup>136</sup> SEC Release No. 34-93613, “Reporting of Securities Loans,” *available at* <https://www.sec.gov/rules/proposed/2021/34-93613.pdf> (last accessed on December 3, 2021) (“Margins on securities loans are negotiable. The variation around the standard margins of 102 percent and 105 percent can be attributed to firm-specific differences in margining policies and the quality and type of the collateral security.”) (citing Office of Financial Research Pilot Survey). The cited paper shows that the 90% of securities lending transactions take place with collateral margins ranging from 100% to 111%. *See* Baklanova et al., “A Pilot Survey of Agent Securities Lending Activity,” OFR Working Paper, p. 13, August 23, 2016, *available at* <https://www.financialresearch.gov/working-papers/2016/08/23/pilot-survey-of-agent-securities-lending-activity/> (last accessed on December 3, 2021).

<sup>137</sup> MPSKAT00077876.

<sup>138</sup> MPSKAT00077640; MPSKAT00077876; MPSKAT00077418-9 at MPSKAT00077419. On a per-share basis, this equals DKK 43,680.2893, which is 106.6% of the closing price of DKK 40,960.00 on April 16, 2013, the day prior to the close of the loan. **Exhibit 12** (Bloomberg, L.P. screenshot).

<sup>139</sup> U.S. Securities and Exchange Commission, “Dividend,” *available at* <https://www.investor.gov/introduction-investing/investing-basics/glossary/dividend> (last accessed on November 30, 2021).

<sup>140</sup> **Exhibit 13** (Bloomberg, L.P. screenshots).

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discussed above, stock holding records at the CSD may or may not reflect the end investor, this process involves the company distributing the dividend amounts to the identified holders of record on the record date, which can be custodians, which, in turn, distribute dividend amounts to their clients, which may also be custodians, which, in turn, subsequently distribute dividend amounts to their own clients (and so on, through the custody chain).

120. A stock's "ex-dividend date" is set with reference to the "record date" and the regulator-mandated settlement period for trades that take place on an exchange. As explained above, prior to October 6, 2014, a trade executed on an exchange settled three business after trade date; starting October 6, 2014, a trade executed on an exchange settled two business days after trade date. Thus prior to October 6, 2014, a stock's ex-dividend date was two business days before its record date because any exchange-traded purchase on or after the ex-dividend date would settle after the record date. As of October 6, 2014, the gap between the ex-dividend date and the record date was reduced to one business day. This is consistent with the data I see for the Analyzed Transactions. For the 2013 Analyzed Transaction that I reviewed in this report, the record date was two business days after the ex-dividend date, and for the November/December 2014 Analyzed Transaction, the record date was one business day after the ex-dividend date.<sup>141</sup>
121. The period before the ex-dividend date is called the "cum-dividend" trading period. Cum-dividend means "with the dividend." An investor that purchases shares cum-dividend expects to receive the dividend amount associated with those shares. The cum-dividend period ends on the cum-dividend date, which is the last day an

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<sup>141</sup> Exhibits 14 and 15 (Bloomberg, L.P. screenshots).

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investor that purchases shares has an economic claim to receive the dividend amount and is the day before the ex-dividend date.<sup>142</sup>

122. While the ex-dividend date is set with reference to the settlement period for exchange trades, the economic implications are the same for the investors selecting a settlement period that is longer than the regulator-mandated settlement period for trades executed on an exchange. This is because the market price of a stock before an ex-dividend date is typically higher than the market price of a stock on or after the ex-dividend date. Share prices typically fall on the ex-dividend date commensurate with the size of the dividend and related tax effects.<sup>143, 144</sup>
123. Large differences between the drop in market price on the ex-dividend date and the size of the dividends can create arbitrage opportunities for traders, and market forces would drive the prices such that there are no exploitable arbitrage opportunities.<sup>145</sup>
124. Unless a stock purchase trade settles on or before the record date, additional work may be needed to direct the dividend amount to the party entitled to it.

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<sup>142</sup> U.S. Securities and Exchange Commission, “Ex-Dividend Dates: When Are You Entitled to Stock and Cash Dividends,” *available at* <https://www.investor.gov/introduction-investing/investing-basics/glossary/ex-dividend-dates-when-are-you-entitled-stock-and> (last accessed on November 30, 2021); NASDAQ, “Cum Dividend,” *available at* <https://www.nasdaq.com/glossary/c/cum-dividend> (last accessed on December 30, 2021).

<sup>143</sup> Elton, Edwin J. and Martin J. Gruber, “Marginal Stockholder Tax Rates and the Clientele Effect,” *The Review of Economics and Statistics*, 1970, 52(1), pp. 68-74; Graham, John R., Roni Michaely, and Michael R. Roberts, “Do Price Discreteness and Transactions Costs Affect Stock Returns? Comparing Ex-dividend Pricing Before and After Decimalization,” *Journal of Finance*, 2003, 58(6), pp. 2611-2635 [Graham et al. (2003)], p. 2611; Zhang, Yi, Kathleen A. Farrell, and Todd A. Brown, “Ex-Dividend Day Price and Volume: The Case of 2003 Dividend Tax Cut,” *National Tax Journal*, 2008, 61(1), pp. 105-127 [Zhang et al. (2008)], p. 105.

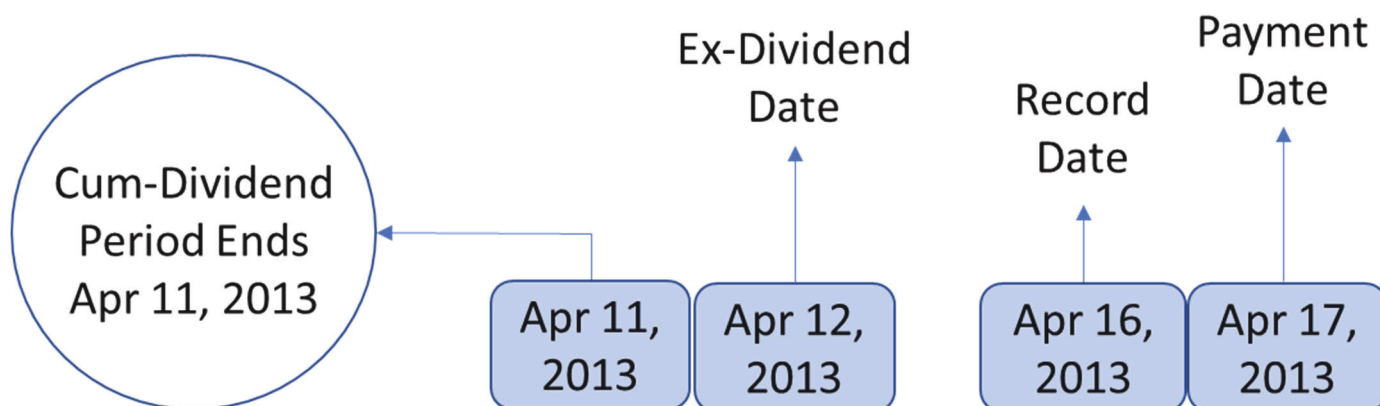
<sup>144</sup> Frank, Murray, and Ravi Jagannathan, “Why Do Stock Prices Drop by Less than the Value of the Dividend? Evidence from a Country Without Taxes,” *Journal of Financial Economics*, 1998, 47(2), pp. 161-188, (“In a perfect Walrasian market with no taxes or transactions costs, **on the ex-dividend day share prices would fall by exactly the value of the dividend that is paid** on each share. It is well known that in fact, on average share prices do not fall by the full amount.”) (emphasis added) *See also* Graham et al. (2003), p. 2611 (explaining that “if capital markets were perfect, a stock’s price would fall by the amount of the dividend on the ex-day. Instead, the ratio of price drop to dividend, known as the ex-day premium, has been consistently below one for decades (*e.g.*, Elton and Gruber (1970), Michaely (1991), or Eades, Hess and Kim (1994))”); Zhang et al. (2008), p. 105 (“the widely documented phenomenon that the ex-dividend day price drops by less than the amount of the dividend”).

<sup>145</sup> There might still be some unexploited arbitrage profits because it might not be profitable for arbitrageurs to act on the opportunities due to the transaction costs and potential risks.

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125. As noted earlier, investors receive dividend amounts processed through their custodians. The calculation of payments owed is a common administrative responsibility of custodians,<sup>146</sup> and may include amounts from the stock issuer via a chain of custody or from another source (*e.g.*, the seller).<sup>147</sup>
126. **Figure 1** below illustrates these periods for the MAERSKB stock trade made by the RJM Plan on April 11, 2013, in its Analyzed Transaction.

**Figure 1: Timeline of Dividend Dates for April 2013 MAERSKB Stock Trade By the RJM Plan<sup>148</sup>**



127. As the figure illustrates, the RJM Plan purchase of the MAERSKB stock on April 11, 2013 occurred in the cum-dividend period (*i.e.*, immediately before the ex-

<sup>146</sup> The Clearing House, “The Custody Services of Banks,” July 2016, p. iii, *available at* [https://www.theclearinghouse.org/-/media/tch/documents/research/articles/2016/07/20160728\\_tch\\_white\\_paper\\_the\\_custody\\_services\\_of\\_banks.pdf](https://www.theclearinghouse.org/-/media/tch/documents/research/articles/2016/07/20160728_tch_white_paper_the_custody_services_of_banks.pdf) (last accessed on December 17, 2021).

<sup>147</sup> In Europe, the payment from another source is called payment related to “market claim,” which refers to the “Process to reallocate the proceeds of a Distribution to the contractually entitled party.” See “Market Standards for Corporate Actions Processing,” Revised version 2012 (Updated 2015), available at <https://www.clearstream.com/resource/blob/1292816/c8d2a31466a8202f48a8585d11830787/market-standards-ca-data.pdf> (last accessed on December 28, 2021). In the U.S., the payment is known as a “manufactured dividend” or “substitute dividend.” The dividend is “manufactured” in the sense that the payment comes from an entity different from the securities issuer.

<sup>148</sup> Dividend dates from Bloomberg, L.P., shown on **Exhibit 14**. Trade dates from trading documents, as described in Section VIII.A.

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dividend date). Therefore, the RJM Plan bought shares of MAERSKB at a price that reflected an entitlement to a payment in the amount of the dividend.

128. For the Analyzed Transactions, the custodians credited the Plans' accounts with dividend amounts, which equal gross dividends reduced by 27% withholding tax.<sup>149</sup>

**VII. ACADEMIC RESEARCH HAS SHOWN THAT INVESTORS IN NUMEROUS COUNTRIES HAVE ENGAGED IN DIVIDEND ARBITRAGE STRATEGIES**

129. The Pension Plan Strategy pursued in the Analyzed Transactions is a hedged dividend capture strategy and is a type of dividend arbitrage.<sup>150</sup>
130. Arbitrage generally refers to a strategy involving simultaneous trading of identical or similar financial instruments to profit from price differences. The Pension Plan Strategy is an example of arbitrage trading often pursued by tax-advantaged investors.<sup>151</sup>
131. For example, as explained in detail in §VIII, the Pension Plan Strategy involved buying a dividend-paying stock and simultaneously selling forward or flex futures contracts that almost entirely eliminated the risk from fluctuations in the price of the stock while allowing the Plans to benefit from their tax-exempt status and capture the tax withholding on dividends (net of transaction costs).<sup>152</sup>

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<sup>149</sup> The December 2013 Solo Capital Statement for the RJM Plan shows the MAERSKB dividend amount of DKK 9,110,400.00 (see MPSKAT00135581-651 at MPSKAT00135581). The 2014 Old Park Lane statement for the Proper Pacific Plan shows the Chr. Hansen dividend amount of DKK 2,310,387.95 (PROPPACIF00000955-61 at PROPPACIF00000955).

<sup>150</sup> See, e.g., Brown, Keith C., and Scott L. Lummer, "The Cash Management Implications of a Hedged Dividend Capture Strategy," *Financial Management*, 1984, pp. 7-17 discussing and analyzing implications of hedged dividend arbitrage strategy for U.S. corporations, which had a lower tax rates on dividends.

<sup>151</sup> The term dividend arbitrage refers to trading pursued by investors to take advantage of their particular tax situation. Depending on their tax situation, investors like the pension plans might want to pursue a dividend capture strategy, whereas others might want to pursue a dividend give-up strategy. Collectively, I refer to dividend capture and dividend give-up strategies as dividend arbitrage strategies.

<sup>152</sup> For a tax-exempt investor such as the pension plans, flex futures or forward contracts, if available, on the stock would be the instrument of choice from an economic perspective because those contracts can almost entirely eliminate the price risk while allowing the pension plans to capture the arbitrage profit. See, e.g., Brown and Lummer (1984), p. 8 noting that, a hedged dividend capture strategy could involve "the purchase of a share of common stock to cover the coincidental sale of a call option. When done properly, this technique is a virtually risk-free method to secure the cash payout."

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132. Modern finance theory recognizes that investors hold different portfolios, and these differences reflect the differences in investors' financial situations, including their wealth, risk tolerance, investment horizon, tax status, and expectations about the future performance of investments. In particular, some investors are more willing to invest in dividend-paying stocks than others.<sup>153</sup>
133. Dividend arbitrage strategies are neither new nor unique examples of how tax incentives influence financial decisions and investment strategies.<sup>154</sup> Tax motivated arbitrage trading has been studied in the literature for decades. For example, an article published in 1955 in the *Journal of Finance* notes that "on balance, a tax-paying individual will do better to sell before an ex-dividend date but to buy after it. For a tax-exempt institution, the rule is exactly the reverse."<sup>155</sup>
134. Another academic article published in 1994 notes that "dividend capture programs have been employed for many years by U.S. corporations, by Japanese insurers, and by others."<sup>156</sup> The article further notes that "dividend capture activities represent a substantial amount of ex-day trading, primarily for high dividend yield stocks."<sup>157</sup>

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<sup>153</sup> The groups of investors that differ in their preference for dividend-paying stocks are called "clienteles," and the theory of these clienteles and their repercussions for stock prices and firms' dividend policies is called the clientele effect. Differences in investors' preferences for dividend-paying stocks lead to short-term trading around ex-dividend dates. This theory is called dynamic clientele effect or dividend-capture theory. This idea is developed in Kalay, Avner, "The Ex-Dividend Day Behavior of Stock Prices: A Reexamination of the Clientele Effect," *Journal of Finance*, 1982, 37(4), pp. 1059-1070. See also Boyd, John H. and Ravi Jagannathan, "Ex-Dividend Price Behavior of Common Stocks," *Review of Financial Studies*, 1994, 7(4), pp. 711-741.

<sup>154</sup> Numerous financial decisions by consumers and businesses are impacted by the tax implications of those decisions. See, e.g., Scholes, Myron, Mark A. Wolfson, Merle M. Erickson, Michelle L. Hanlon, Edward L. Maydew, and Terrence J. Shevlin, "Taxes and Business Strategy, A Planning Approach," 5th Edition, Prentice Hall, 2014.

<sup>155</sup> Campbell, James A. and William Beranek, "Stock Price Behavior on Ex-Dividend Dates," *Journal of Finance*, 1955, 10(4), pp. 425-429, p. 429. See also Brown and Lummer (1984), p. 16 noting "that a comprehensive program of hedged dividend capture can be a most workable approach to cash management" by the U.S. corporations.

<sup>156</sup> Boyd, John H. and Ravi Jagannathan, "Ex-Dividend Price Behavior of Common Stocks," *Review of Financial Studies*, 1994, 7(4), p. 712.

<sup>157</sup> *Id.* at 713.



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135. Academic research has established that investors in numerous countries have engaged in dividend arbitrage strategies for decades. The following are illustrative.
136. *United States*: Koski and Scruggs (1998) examines NYSE trading and find “strong evidence of significant abnormal volume by securities dealers around ex-dividend days.” They report “strong evidence that securities dealers sell these high-yield stocks cum-dividend and buy-ex dividend.”<sup>158</sup>
137. More recently, Henry and Koski (2017) analyze dividend-paying NYSE-listed stocks for the period from January 1999 to March 2008. They document significant abnormal institutional trading volume during the ex-dividend period and conclude that “[i]nstitutional dividend capture trading is persistent.”<sup>159</sup>
138. *Australia*: Le et al. (2020) study the prices and trading behavior of investors in the Australian stock market and find that “both domestic and foreign investors trade abnormally around the ex-dividend day.”<sup>160</sup> The paper finds:

*Using a sample of Australian stocks during the 1996–2014 period, this study examines how tax heterogeneity between domestic and foreign investors affects trading behaviour and stock prices around the ex-dividend day. Domestic investors prefer dividends and tend to buy stocks cum-dividend and sell them ex-dividend whereas foreign investors tend to trade in the opposite direction.*<sup>161</sup>

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<sup>158</sup> Koski, Jennifer L. and John T. Scruggs, “Who Trades Around the Ex-Dividend Day? Evidence from NYSE Audit File Data,” *Financial Management*, 1998, 27(3), pp. 58-72. The paper categorizes investors trades in three categories and reports that “[o]verall, we find strong evidence of dividend-capture trading by securities dealers, some evidence of corporate dividend-capture trading, but little evidence of tax-clientele trading.” [Koski and Scruggs (1998), p. 71].

<sup>159</sup> Henry, Tyler R. and Jennifer L. Koski, “Ex-Dividend Profitability and Institutional Trading Skill,” *Journal of Finance*, 2017, 72(1), pp. 461-493, Abstract.

<sup>160</sup> Le, Nguyen Ngoc Anh, Xiangkang Yin, and Jing Zhao, “Effects of Investor Tax Heterogeneity on Stock Prices and Trading Behaviour Around the Ex-Dividend Day: The Case of Australia,” *Accounting & Finance*, 2020, 60(4), pp. 3775-3812, [Le et al. (2020)], p. 3776.

<sup>161</sup> Le et al. (2020), abstract (emphasis added). In Australia, domestic investors value dividends more than the foreign investors due to “franking credits.” See Le et al. (2020), p. 3776 explaining “Australia operates a full dividend imputation system in which franking credits or credits for corporate tax paid can be attached to dividends when they are distributed. The availability of franking credits creates a well-defined difference between domestic and foreign investors in terms of tax preferences for dividends. Domestic investors can utilise franking credits to offset their tax obligations and the unused franking credits can be refunded. On the other hand, franking credits have limited and little value to foreign investors.”



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139. *Finland*: Rantapuska (2008) examines the trading behavior of investors in the Finnish stock market over the period from January 1, 1995, to November 28, 2002.<sup>162</sup> The paper finds that “investors with a preference for dividend income buy shares cum-dividend and sell ex-dividend; the reverse is true for investors with the opposite preference.”<sup>163</sup> The paper also reports dividend arbitrage trades with a holding period of just one night and finds that investors “engage in overnight [dividend] arbitrage, earning on average a 2% overnight return on their invested capital.”<sup>164</sup>
140. *Italy*: Michaely and Murgia (1995) study “all common and nonconvertible, bearer-savings, dividend-paying stocks traded on the MSE [Milan Stock Exchange] between 1981 and 1990.”<sup>165</sup> During the period of study, “In Italy, savings stock dividends are taxed at a fixed rate of 15 percent for all market participants, whereas the tax rates on common stock dividends vary widely across market participants.”<sup>166</sup> The authors “bring evidence consistent with the hypothesis that a significant portion of the ex-[dividend] day [trading] activity is motivated by differential dividend tax[es].”<sup>167</sup>
141. *Taiwan*: Chen et al. (2013) research stocks traded on the Taiwan Stock Exchange during the period from January 1992 to December 2006 and “find that differential taxes are an important factor affecting share prices and the behavior of investors around the ex-dividend day.”<sup>168</sup> They report that “high tax-bracket investors sell shares cum-dividend, subsequently reversing to buy shares on the ex-dividend day,

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<sup>162</sup> Rantapuska, Elias, “Ex-Dividend Day Trading: Who, How, and Why?: Evidence from the Finnish Market,” *Journal of Financial Economics*, 2008, 88(2), pp. 355-374, [Rantapuska (2008)], p. 360.

<sup>163</sup> Rantapuska (2008), Abstract.

<sup>164</sup> *Id.*

<sup>165</sup> Michaely, Roni and Maurizio Murgia, “The Effect of Tax Heterogeneity on Prices and Volumes around the Ex-Dividend Day: Evidence from the Milan Stock Exchange,” *Review of Financial Studies*, 1995, 8(2), pp. 369-399 [Michaely and Murgia (1995)], p. 381.

<sup>166</sup> *Id.* at 370.

<sup>167</sup> *Id.* at 396.

<sup>168</sup> Chen, Hung-Ling, Edward H. Chow, and Cheng-Yi Shiu, “Ex-Dividend Prices and Investor trades: Evidence from Taiwan,” *Pacific-Basin Finance Journal*, 2013, 24, pp. 39-65, Abstract.

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whereas low tax-bracket individual investors, proprietary traders and corporate shareholders trade in the opposite direction.”<sup>169</sup>

142. Research has shown that, in general, trading volume increases around the ex-dividend date.<sup>170</sup> This is consistent with what SKAT has identified as “remarkably large stock trades around the time of the dividend.”<sup>171</sup> SKAT has charts showing trading in terms of DKK-volume (shares traded multiplied by trading price) and ex-dividend dates that indicate increased trading around the ex-dividend dates for several Danish equity securities for the period from 2012 to 2014.<sup>172</sup>
143. In short, academic research has shown that investors in numerous countries have engaged in dividend arbitrage strategies.

**VIII. THE ANALYZED TRANSACTIONS**

144. The following is an overview of the trades and activity included in both of the Analyzed Transactions:
- a. Plans placed an order with an executing broker to purchase shares of a dividend-paying Danish stock on the day immediately before the ex-dividend date, *i.e.*, on the last cum-dividend date.<sup>173</sup> The executing broker confirmed that the order has been executed the same day and gave up the execution to the Plans’ custodians for trade clearance and settlement; the settlement date was after the dividend record date.
  - b. On the same day as the stock purchase, Plans hedged the price risk of the purchased stocks by entering into either flex futures or forward contracts that allowed Plans to sell those shares (*i.e.*, the same number of shares) on a future date at a pre-determined price.<sup>174</sup>

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<sup>169</sup> *Id.*

<sup>170</sup> *See, e.g.*, Koski and Scruggs (1998); *See also* Graham, John R. and Alok Kumar, “Do Dividend Clienteles Exist? Evidence on Dividend Preferences of Retail Investors,” *The Journal of Finance*, 2006, 61(3), pp. 1305-1336.

<sup>171</sup> SKAT\_MDL\_001\_00471881\_T.

<sup>172</sup> SKAT\_MDL\_001\_00471889\_T.

<sup>173</sup> As explained earlier, the shares purchased in the Analyzed Transactions were for the stocks of two large Danish companies.

<sup>174</sup> The flex futures contracts were cleared by Bclear, an NYSE Euronext subsidiary. The forward contracts were done under a bilateral agreement directly entered into by the plan with another counterparty.

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- c. On the stock trade settlement date, Plans lent out the shares to a counterparty and received a cash amount equal to the stock value on the stock purchase date as collateral. Under the lending agreement, Plans paid an interest to the counterparty for the cash collateral and received a fee for lending the stock.<sup>175</sup>
  - d. On or after the dividend payment date, the custodian credited the Plans' accounts with a dividend amount equal to 73% of the gross dividend for the shares.
  - e. Sometime after the dividend record date, the Plans unwound the transaction, which involved the following trades and activities:
    - i. Plans recalled the loaned shares, sold the recalled shares, and purchased the flex futures or forward contracts with the same maturity as the contracts they previously sold.
    - ii. The custodian debited the refunded collateral from the Plan accounts and credited the stock sale proceeds to the Plan accounts.
  - f. Subsequently, the custodian debited the interest payment under the stock lending agreement, and other transaction costs from the Plan accounts and credited the fees on the stock lending agreement to the Plan accounts.
145. As described above, each Plan obtained economic exposure to the issuer's shares when the broker executed the Plan's purchase order on the last cum-dividend date. Because the Plans purchased stocks on a cum-dividend date, the Plans obtained the economic right to receive a dividend amount.
146. The stock lending financed the Plans' purchases of the shares. In economic substance, the Plans obtained loans collateralized by their shares.
147. The flex futures and the forward contracts used by the RJM Plan and the Proper Pacific Plan, respectively, hedged the risk to which each Plan was exposed due to the fluctuations in the prices of those shares – hence the term “hedged dividend capture.” Without the hedge, the risk from the share price fluctuations would often render the Pension Fund Strategy unattractive. The hedge was established at the time of the stock purchase via forward or futures contracts through which Plans agreed to sell

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<sup>175</sup> Proper Pacific also paid clearing fees on the stock loan start and recall. (PROPPACIF00000109-112 at PROPPACIF00000112). The relevant statements for the RJM Plan do not show debit of any clearing fees related to the stock loan start/ recall from the Plan's account. (MPSKAT00080613-4; MPSKAT00086209-10.)

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shares as of a certain future date. Plans later purchased offsetting flex futures or forward contracts that had the effect of closing out the hedge.

148. Each Plan's **gross** profit from the Pension Fund Strategy was the sum of:
- a. The profit (loss) on the stock trade,
  - b. The profit (loss) on the flex futures or forward hedging transaction,
  - c. The gross dividend amount received (*i.e.*, the sum of the dividend net of withholding tax payment received from the custodian and the dividend reclaim), and
  - d. The net rebate from lending the stock (*i.e.*, the difference between the fee for lending the stock and interest for the cash collateral).<sup>176</sup>
149. Because the Plans incurred fees for various trades in the Analyzed Transactions, each Plan's **net** profit equals the gross profit less the fees paid on the various transactions (*e.g.*, stock purchase, futures purchase, and stock loan).
150. As explained below, the RJM Plan's net profit from the MAERSKB stock related transactions was DKK 3,360,345.58, and the Proper Pacific Plan's net profit for the Chr. Hansen stock related transactions was DKK 790,583.01.

**A. RJM Plan's Analyzed Transaction**

151. The Analyzed Transaction for the RJM Plan includes the Plan's 2013 trades in MAERSKB, class B shares issued by A.P. Moller-Maersk A/S, a large Danish company.

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<sup>176</sup> As noted earlier, Proper Pacific also paid clearing fees on the stock loan start and recall.

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152. In 2013, MAERSKB declared an annual dividend of DKK 1,200.00 per share.<sup>177</sup>  
The ex-dividend date was April 12, 2013 and the dividend record date was April 16, 2013.<sup>178</sup>
153. The RJM Plan's hedged dividend capture strategy in MAERSKB stock involved several transactions. Solo Capital, which was based in the U.K., was the custodian for these transactions.<sup>179</sup> **Figure 2** below shows various transactions.

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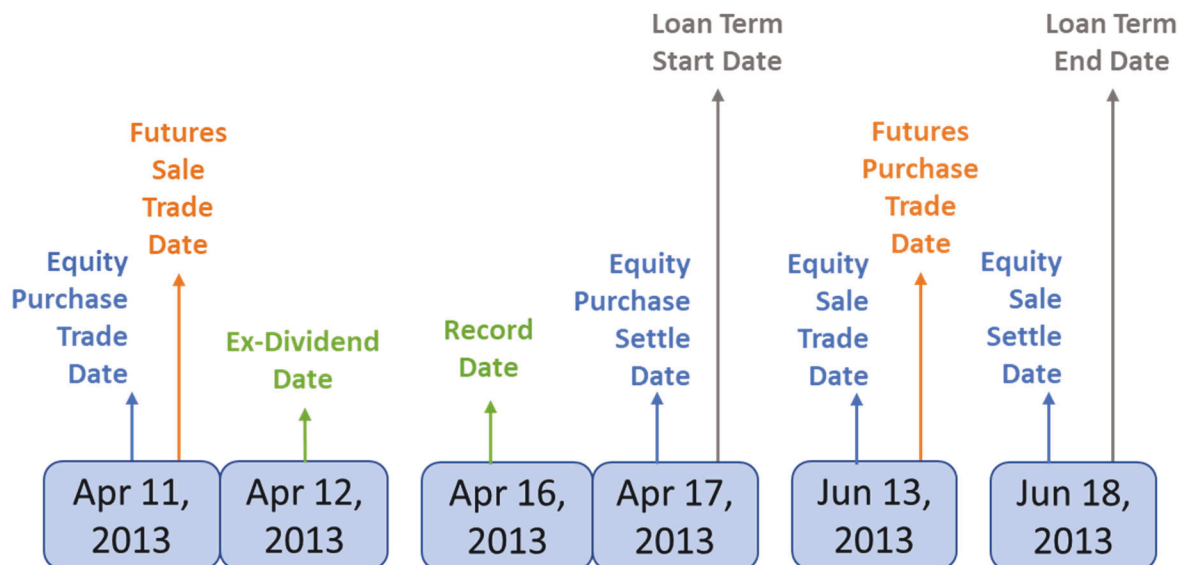
<sup>177</sup> Per Solo Capital's Dividend Credit Advice to the RJM Plan, issued April 17, 2013, the RJM Plan was notified of a MAERSKB gross dividend of DKK 1,200 per share, which is equal to DKK 12,480,000.00 divided by 10,400 shares (WH\_MDL\_00268445-6 at WH\_MDL\_00268445).

Bloomberg, L.P. shows a gross dividend of DKK 240.00 per share for MAERSKB (**Exhibit 14**), which is one-fifth of the gross dividend of DKK 1,200 per share. The figure of DKK 240.00 per share is retroactively adjusted by an adjustment factor of 5 per Bloomberg, L.P. based on the fact that in 2014, AP Moller Maersk issued four additional shares of MAERSKB for every share of MAERSKB (See A.P. Moller Maersk A/S 2014 Annual Report, p. 21; A.P. Moller – Maersk A/S, “A.P. Moller – Maersk A/S – Proposal for Issuance of Bonus Shares and for Election of New Members for the Board of Directors,” February 27, 2014).

<sup>178</sup> **Exhibit 14** (Bloomberg, L.P. screenshot).

<sup>179</sup> See Client Custody Agreement between Solo Capital Partners LLP and RJM Capital LLC Pension Plan, 2013 (MPSKAT00003776-84); Client Custody Agreement between Solo Capital Partners LLP and RJM Capital LLC Pension Plan, 2014 (MPSKAT00104151-72).

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**Figure 2: The RJM Plan 2013 Transactions Related To MAERSKB Stock<sup>180</sup>**

154. On April 11, 2013, the RJM Plan executed two opening transactions for its hedged dividend capture strategy – purchased the MAERSKB stock and sold flex futures on the same stock to hedge the price risk.

- a) On April 11, 2013 (*i.e.*, the day before the ex-dividend date), the RJM Plan asked FGC Securities to purchase 10,400 shares of MAERSKB stock at a price of DKK 43,680.2893 per share.<sup>181</sup> In emails to the RJM Plan, Solo acknowledged and approved the RJM Plan's request to FGC Securities to purchase 10,400 shares of MAERSKB stock at a price of DKK 43,680.2893 per share.<sup>182</sup> As shown in FGC Securities' emailed trade confirmation, FGC Securities confirmed the April 11 execution at that price.<sup>183</sup> FGC Securities gave up the trade to Solo Capital for

<sup>180</sup> Dividend dates from Bloomberg, L.P., shown on **Exhibit 14**. Transaction dates from trading documents, as described in this section.

<sup>181</sup> MPSKAT00076964; MPSKAT00077050; MPSKAT00077088.

<sup>182</sup> MPSKAT00077090; MPSKAT00077295.

<sup>183</sup> MPSKAT00077415; MPSKAT00077418-9 at MPSKAT00077419.

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clearing and settlement.<sup>184</sup> Per the trade approval, the stock purchase settlement date was April 17, 2013 (*i.e.*, the day after the dividend record date).<sup>185</sup> The total value of the trade was DKK 454,275,008.72.<sup>186</sup> The RJM Plan's economic exposure to 10,400 shares of MAERSKB stock began when the trade was executed. The economic exposure included the claim to a dividend amount as the stock was purchased before the ex-dividend date.

- b) Also on April 11, 2013 (*i.e.*, the same day as the stock purchase date), the RJM Plan asked FGC securities to sell 104 flex futures contracts on MAERSKB stock for DKK 42,821.31 per share.<sup>187</sup> As shown in FGC Securities' trade confirmation, FGC Securities confirmed the April 11 sale of the flex futures on MAERSKB stock for DKK 42,821.31 per share, with each contract covering 100 shares of MAERSKB stock.<sup>188</sup> The total contract value was DKK 445,341,624.00.<sup>189</sup> The expiration date for the contracts was June 21, 2013.<sup>190</sup>

155. The RJM Plan executed a stock lending transaction with an April 17, 2013 Loan Term start date.<sup>191</sup>

- a) The RJM Plan loaned 10,400 shares of MAERSKB to Colbrook Ltd. at DKK 43,680.2893 per share in exchange for collateral of DKK 454,275,008.72.<sup>192</sup> The

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<sup>184</sup> MPSKAT00077090; MPSKAT00077295.

<sup>185</sup> MPSKAT00077295.

<sup>186</sup> MPSKAT00077418-9 at MPSKAT00077419.

<sup>187</sup> MPSKAT00076965.

<sup>188</sup> MPSKAT00077418-9 at MPSKAT00077418.

<sup>189</sup> MPSKAT00077418-9 at MPSKAT00077418. DKK 445,341,624.00 equals futures contract price of DKK 42,821.31 (price per MAERSKB share) multiplied by 104 contracts further multiplied by 100 (shares per contract).

<sup>190</sup> MPSKAT00077418-9 at MPSKAT00077418. Per FGC Securities' trade confirmation, the flex futures trade was conducted through the Euronext - BClear exchange, which as noted earlier, is a clearing platform for flex futures contracts.

<sup>191</sup> MPSKAT00077640.

<sup>192</sup> MPSKAT00135581-651 at MPSKAT00135590 and MPSKAT00135603.

On a per-share basis, the cash collateral equals DKK 43,680.2893, which is 106.6% of the closing price of DKK 40,960.00 on April 16, 2013, the day prior to the close of the loan, as shown on **Exhibit 12**.

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interest rate on the cash collateral was Overnight DKK LIBOR plus 70 basis points. The stock lending fee was Overnight DKK LIBOR plus 49.55 basis points. That is, on a net basis, the RJM Plan had to pay a fee of 20.45 basis points to the stock borrower.<sup>193</sup>

156. As noted above, the collateral was used to finance the share purchase.<sup>194</sup>
157. The stock lending agreement that the RJM Plan entered into was based on the standard security lending agreement template published by ISLA.<sup>195</sup> The RJM Plan's economic exposure to the shares did not end after lending the stock as explained in ¶98 of §V.A.
158. On June 13, 2013, the RJM Plan sold its stock position and sold an offsetting hedge to terminate its hedged dividend capture strategy.
  - a) In a June 13, 2013 email, the RJM Plan asked FGC Securities to sell 10,400 shares of MAERSKB stock at DKK 40,750.2863 per share.<sup>196, 197</sup> FGC Securities confirmed the sale in an emailed trade confirmation.<sup>198</sup> FGC Securities gave up the trade to Solo Capital for clearing and settlement.<sup>199</sup> The settlement date for the stock trade was June 18, 2013. The total sale proceeds from the trade were DKK 423,802,977.52.<sup>200</sup>

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<sup>193</sup> MPSKAT00077640; MPSKAT00077781; MPSKAT00077876.

<sup>194</sup> MPSKAT00077090; MPSKAT00077295; MPSKAT00077781; MPSKAT00077876.

<sup>195</sup> ISLA, Global Master Securities Lending Agreement, Version: January 2010, *available at* [https://www.islaemea.org/wp-content/uploads/2019/03/GMSLA\\_2010\\_amendments\\_July\\_2012-1.pdf](https://www.islaemea.org/wp-content/uploads/2019/03/GMSLA_2010_amendments_July_2012-1.pdf). (See, e.g., Global Master Securities Lending Agreement between Colbrook Ltd. and RJM Capital Pension Plan (MPSKAT00068151-92)).

<sup>196</sup> MPSKAT00085109; MPSKAT00085149; MPSKAT00085175-6.

<sup>197</sup> Per its June 13, 2013 emails to the RJM Plan, Solo acknowledged and approved the RJM Plan's request to FGC Securities to sell 10,400 shares of MAERSKB stock at DKK 40,750.2863 per share. MPSKAT00085178; MPSKAT00085222-3.

<sup>198</sup> MPSKAT00085288; MPSKAT00085289.

<sup>199</sup> MPSKAT00085178; MPSKAT00085222-3.

<sup>200</sup> MPSKAT00085222-3; MPSKAT00085289.



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- b) Also on June 13, 2013, the RJM Plan asked FGC Securities to buy 104 flex futures contracts on MAERSKB stock for DKK 40,750.94 per share.<sup>201</sup> FGC Securities executed the trade and confirmed the purchase of 104 flex futures contracts for DKK 40,750.94 per share in an equity futures confirmation.<sup>202</sup> The total value of the contracts was DKK 423,809,776.00.<sup>203</sup> The closing trade was cleared via BCclear.
159. Also on June 13, 2013, the RJM Plan emailed Colbrook Ltd. requesting to recall the 10,400 loaned shares of MAERSKB.<sup>204, 205</sup> On June 18, 2013, the RJM Plan's shares were received back from the stock loan and delivered to the new purchaser while the cash proceeds of the sale were used to pay back the stock loan collateral amount.
160. The RJM Plan's gross profit from the hedged dividend capture transaction is DKK 340.37 per share (for an aggregate amount of DKK 3,539,816.80), calculated as the sum of the gain or loss on stocks and flex futures transactions, dividend amount credited by the custodian, and the tax reclaim.
- a) Stock: The stock trade resulted in a loss of DKK 2,930.00 per share (DKK 40,750.2863 sale price per share less DKK 43,680.2893 purchase price per share).
- b) Futures: The futures trades resulted in a gain of DKK 2,070.37 per share (DKK 42,821.31 sale price per share less DKK 40,750.94 purchase price per share).

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<sup>201</sup> MPSKAT00085108.

<sup>202</sup> MPSKAT00085291.

<sup>203</sup> *Id.*

<sup>204</sup> MPSKAT00085143; MPSKAT00085254-5 at MPSKAT00085254; MPSKAT00085260-1 at MPSKAT00085260; MPSKAT00085264-5 at MPSKAT00085264.

<sup>205</sup> Solo acknowledged the request on June 13, 2013 and issued an ex-post approval on June 25, 2013, respectively, the RJM Plan recalled the 10,400 shares of MAERSKB. MPSKAT00085269; MPSKAT00085876.

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- c) Dividends: Solo credited the RJM Plan account with dividends of DKK 876.00 per share, which is 73% of the gross dividend of DKK 1,200.00 per share.<sup>206</sup>
161. As shown in Solo's statement for the RJM Plan for the year ending December 31, 2013, the RJM Plan incurred interest charges of DKK 588,401.43 to Colbrook Ltd. and earned stock lending fees of DKK 440,269.76 from Colbrook Ltd.<sup>207</sup> As a result, the RJM Plan paid a net fee of DKK 148,131.67 on the stock lending transaction.<sup>208</sup> Additionally, the RJM Plan paid other fees (*e.g.*, stockbroker, futures broker, custody fees, *etc.*) of DKK 31,339.55.<sup>209</sup> Thus, the RJM Plan paid total fees of DKK 179,471.22 (sum of DKK 148,131.67 and DKK 31,339.55).
162. Subtracting transaction fees of DKK 179,471.22 from the RJM Plan's gross profit of DKK 3,539,816.80 yields a total net profit of DKK 3,360,345.58. These calculations are shown in **Table 1** below.

**Table 1: The RJM Plan 2013 Transactions Related to MAERSKB Stock Profit Calculations**

	Profit	
	<i>per share</i>	<i>aggregate</i>
Stock Trade	DKK (2,930.00)	DKK (30,472,031.20)
Futures Trade	DKK 2,070.37	DKK 21,531,848.00
Dividend Credit by Custodian	DKK 876.00	DKK 9,110,400.00
Tax Reclaim	DKK 324.00	DKK 3,369,600.00
Gross Profit	<b>DKK 340.37</b>	<b>DKK 3,539,816.80</b>
Less Transaction Fees	DKK (17.26)	DKK (179,471.22)
Net Profit	<b>DKK 323.11</b>	<b>DKK 3,360,345.58</b>

<sup>206</sup> WH\_MD\_00268445-6 at WH\_MD\_00268445. The custodian credited the pension plan's account with a dividend amount of DKK 9,110,400, which equals 73% of the gross dividend of 12,480,000. The amount of DKK 9,110,400 equals DKK 876.00 dividend per share (*i.e.*, DKK 9,110,400 divided by 10,400 shares). The gross profit calculation takes into account the tax reclaim of DKK 324.00 per share (*i.e.*, the gross dividend of DKK 1200.00 per share less DKK 876.00 credited by the custodian to the plan's account).

<sup>207</sup> MPSKAT00135581-651 at MPSKAT00135603-4.

<sup>208</sup> DKK 588,401.43 minus DKK 440,269.76 equals DKK 148,131.67.

<sup>209</sup> See **Exhibit 16** for the calculation of other fees.

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**B. Proper Pacific Plan's Analyzed Transaction**

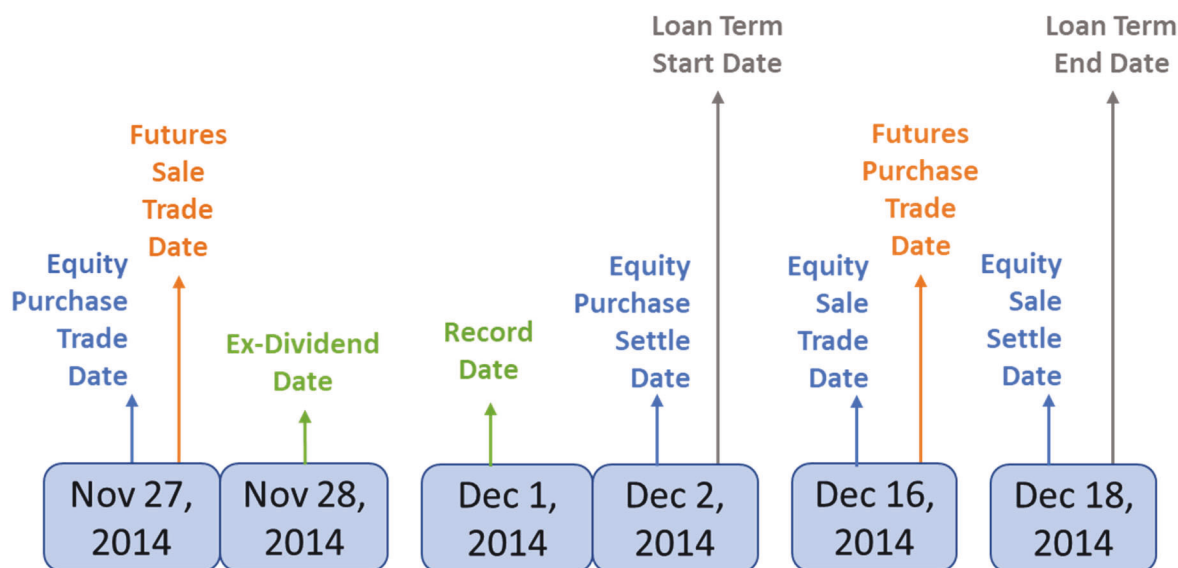
163. The Analyzed Transaction for the Proper Pacific Plan includes the Plan's 2014 trades in shares issued by Chr. Hansen Holding A/S, a large Danish company.
164. In 2014, Chr. Hansen declared an annual dividend of DKK 3.77 per share. The ex-dividend date was November 28, 2014 and the dividend record date was December 1, 2014.<sup>210</sup>
165. The Proper Pacific Plan's hedged dividend capture strategy in Chr. Hansen stock involved several transactions. Old Park Lane, which was based in the U.K., was the custodian for these transactions.<sup>211</sup> **Figure 3** below shows various transactions.

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<sup>210</sup> **Exhibit 15** (Bloomberg, L.P. screenshot).

<sup>211</sup> See Old Park Lane Capital Limited, Terms and Conditions for Custody Services (PROPPACIF00000784-816).

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**Figure 3: The Proper Pacific Plan 2014 Transactions Related to Chr. Hansen Stock<sup>212</sup>**

166. On November 27, 2014, the Proper Pacific Plan executed two opening transactions for its hedged dividend capture strategy – purchased the Chr. Hansen stock and sold forward contracts on the same stock to hedge the price risk.
- a) On November 27, 2014 (*i.e.*, the day before the ex-dividend date), the Proper Pacific Plan asked Bastion Capital London Ltd. to purchase 839,500 shares of Chr. Hansen stock at the close of business price.<sup>213</sup> In emails to the Proper Pacific Plan, Old Park Lane acknowledged and approved the Proper Pacific Plan’s request to Bastion Capital London Ltd. to purchase 839,500 shares of Chr. Hansen stock at a price of DKK 258.90 per share.<sup>214</sup> As shown in Bastion Capital London Ltd.’s emailed trade confirmation, Bastion Capital London Ltd. confirmed the execution at the price of

<sup>212</sup> Dividend dates from Bloomberg, L.P., as shown in **Exhibit 15**. Transaction dates from trading documents, as described in this section.

<sup>213</sup> PROPPACIF00001323-4.

<sup>214</sup> PROPPACIF00001317; PROPPACIF00001318. The close of business price of DKK 258.90 is shown in an email from Bastion Capital London Ltd. to the Proper Pacific Plan confirming the trade price. PROPPACIF00001323-4 at PROPPACIF00001323.

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DKK 258.90.<sup>215</sup> As reflected in Old Park Lane's emails approving the transaction, Bastion Capital London Ltd. gave up the trade to Old Park Lane for clearing and settlement.<sup>216</sup> Per the trade confirmation, the stock purchase settlement date was December 2, 2014 (*i.e.*, the day after the dividend record date).<sup>217</sup> The total value of the trade was DKK 217,346,550.<sup>218</sup> The Proper Pacific Plan's economic exposure to 839,500 shares of Chr. Hansen stock began when the trade was executed. The economic exposure included the claim to a dividend amount as the stock was purchased before the ex-dividend date.

- b) Also on November 27, 2014, the Proper Pacific Plan asked Amalthea Enterprises Ltd. to sell forward 839,500 shares of Chr. Hansen stock at DKK 256.42 per share.<sup>219</sup> As shown in November 27, 2014 emails to the Proper Pacific Plan, Old Park Lane acknowledged and matched the Proper Pacific Plan's trade with Amalthea Enterprises Ltd. to sell forward 839,500 shares of Chr. Hansen stock for DKK 256.42 per share.<sup>220</sup> The total value for the contracts was DKK 215,264,590.<sup>221</sup> The expiration date for the contracts was March 20, 2015.<sup>222</sup>

167. The Proper Pacific Plan executed a stock lending transaction with a December 2, 2014 Loan Term start date.<sup>223</sup>

- a) The Proper Pacific Plan loaned 839,500 shares of Chr. Hansen to Gnosis Capital Ltd. at DKK 258.90 per share in exchange for collateral of DKK 217,346,550.<sup>224</sup> The

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<sup>215</sup> PROPPACIF00001326; PROPPACIF00001327.

<sup>216</sup> PROPPACIF00001317; PROPPACIF00001318.

<sup>217</sup> PROPPACIF00001327.

<sup>218</sup> This is 839,500 shares multiplied by the price of DKK 258.90. *See* PROPPACIF00001327.

<sup>219</sup> PROPPACIF00001325.

<sup>220</sup> PROPPACIF00001319; PROPPACIF00001320.

<sup>221</sup> PROPPACIF00001320.

<sup>222</sup> *Id.*

<sup>223</sup> PROPPACIF00001330.

<sup>224</sup> PROPPACIF00001330; PROPPACIF00000109-112 at PROPPACIF00000112.

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interest rate on the cash collateral was 70 basis points.<sup>225</sup> The stock lending fee was 35.67 basis points.<sup>226</sup> That is, on a net basis, the Proper Pacific Plan had to pay a fee of 34.33 basis points to the stock borrower.<sup>227</sup>

168. As noted above, the collateral was used to finance the share purchase.<sup>228</sup>
169. The stock lending agreement that the Proper Pacific Plan entered into was based on the standard security lending agreement template published by ISLA.<sup>229</sup> The Proper Pacific Plan's economic exposure to the shares did not end after lending the stock as explained in ¶98 of §V.A.
170. On December 16, 2014, the Proper Pacific Plan sold its stock position and purchased an offsetting hedge to terminate its hedged dividend capture strategy.
  - a) In a December 16, 2014 email, the Proper Pacific Plan asked Bastion Capital London Ltd. to sell 839,500 shares of Chr. Hansen stock at the close of business price.<sup>230, 231</sup> Bastion Capital London Ltd. confirmed the sale at the price of DKK 261.00 per share in an emailed trade confirmation.<sup>232</sup> As reflected in Old Park Lane's emails approving the transaction, Bastion Capital London Ltd. gave up the trade to Old Park Lane for clearing and settlement.<sup>233</sup> The settlement date for the stock trade was

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<sup>225</sup> PROPPACIF00001330; PROPPACIF00000109-112 at PROPPACIF00000112.

<sup>226</sup> PROPPACIF00001330; PROPPACIF00000109-112 at PROPPACIF00000112.

<sup>227</sup> 70 less 35.67 is equal to 34.33.

<sup>228</sup> PROPPACIF00001317; PROPPACIF00001318; PROPPACIF00001327; PROPPACIF00001330; PROPPACIF00001331.

<sup>229</sup> Compare PROPPACIF00001035-78 with ISLA, Global Master Securities Lending Agreement, Version: January 2010, available at [https://www.islaemea.org/wp-content/uploads/2019/03/GMSLA\\_2010\\_amendments\\_July\\_2012-1.pdf](https://www.islaemea.org/wp-content/uploads/2019/03/GMSLA_2010_amendments_July_2012-1.pdf).

<sup>230</sup> PROPPACIF00001383-4.

<sup>231</sup> Per its December 16, 2014 emails to the Proper Pacific Plan, Old Park Lane acknowledged and approved the Proper Pacific Plan's request to Bastion Capital London Ltd. to sell 839,500 shares of Chr. Hansen stock. PROPPACIF00001375; PROPPACIF00001373.

<sup>232</sup> PROPPACIF00001395; PROPPACIF00001396.

<sup>233</sup> PROPPACIF00001375; PROPPACIF00001373.

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December 18, 2014.<sup>234</sup> The total value of the sale proceeds from the trade was DKK 219,109,500.<sup>235</sup>

b) Also on December 16, 2014, the Proper Pacific Plan asked Amalthea Enterprises Ltd. to buy forward 839,500 shares of Chr. Hansen stock at DKK 261.22 per share.<sup>236</sup> Based on December 16, 2014 emails to the Proper Pacific Plan, Old Park Lane acknowledged and matched the Proper Pacific Plan's trade with Amalthea Enterprises Ltd. to buy forward 839,500 shares of Chr. Hansen stock at DKK 261.22 per share.<sup>237</sup> The total value of the contracts was DKK 219,294,190.<sup>238</sup> The expiration date for the contracts was March 20, 2015.<sup>239</sup>

171. Also on December 16, 2014, the Proper Pacific Plan emailed Gnosis Capital Ltd. requesting to recall the 839,500 loaned shares of Chr. Hansen.<sup>240, 241</sup> On December 18, 2014, the Proper Pacific Plan's shares were received back from the stock loan and delivered to the new purchaser while the cash proceeds of the sale were used to pay back the stock loan.

172. The Proper Pacific Plan's gross profit from the hedged dividend capture transaction was DKK 1.07 per share (for an aggregate amount of DKK 898,265), calculated as the sum of the gain or loss on stock and forward transactions, the dividend amount credited by the custodian, and the tax reclaim.

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<sup>234</sup> PROPPACIF00001396.

<sup>235</sup> This is 839,500 shares multiplied by the price of DKK 261.00. *See* PROPPACIF00001396.

<sup>236</sup> PROPPACIF00001385.

<sup>237</sup> PROPPACIF00001376; PROPPACIF00001378.

<sup>238</sup> PROPPACIF00001378.

<sup>239</sup> *Id.*

<sup>240</sup> PROPPACIF00001379-80 at PROPPACIF00001379.

<sup>241</sup> Per Old Park Lane's acknowledgement and approval emails to the Proper Pacific Plan dated December 16, 2014, the Proper Pacific Plan recalled the 839,500 shares that the Proper Pacific Plan loaned to Gnosis Capital Ltd. PROPPACIF00001377; PROPPACIF00001374.

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- a) Stock: The stock trade resulted in a gain of DKK 2.10 per share (DKK 261.00 sale price per share less DKK 258.90 purchase price per share).
  - b) Forwards: The forward trades resulted in a loss of DKK 4.80 per share (DKK 256.42 sale price per share less DKK 261.22 purchase price per share).
  - c) Dividends: Old Park Lane credited the Proper Pacific Plan account with dividends of DKK 2.75, which equals 73% of gross dividend of DKK 3.77 per share.<sup>242</sup>
173. As shown in Old Park Lane's statement for the Proper Pacific Plan for the year ending December 31, 2014, the Proper Pacific Plan incurred interest of DKK 67,618.93 to Gnosis Capital Ltd. and earned stock lending fees of DKK 23,880.98 from Gnosis Capital Ltd.<sup>243</sup> As a result, the Proper Pacific Plan paid a net fee of DKK 43,737.95 on the stock lending transaction.<sup>244</sup> Additionally, the Proper Pacific Plan paid other fees (e.g., stockbroker, custody fees, etc.) of DKK 63,944.04.<sup>245</sup> Thus, the Proper Pacific Plan paid a total fee of DKK 107,681.99 (sum of DKK 43,737.95 and DKK 63,944.04).
174. Subtracting transaction fees of DKK 107,681.99 from the Proper Pacific Plan's gross profit of DKK 898,265 yields a total net profit of DKK 790,583.01. These calculations are shown in **Table 2** below.

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<sup>242</sup> PROPPACIF00000955-61 at PROPPACIF00000955. The custodian credited the pension plan's account with a dividend amount of DKK 2,310,387.95, which equals 73% of the gross dividend of DKK 3,164,915. The amount of 2,310,387.95 equals DKK 2.75 dividend per share (i.e., DKK 2,310,387.95 divided by 839,500 shares). The gross profit calculation takes into account the tax reclaim of DKK 1.02 per share (i.e., the gross dividend of DKK 3.77 per share less DKK 2.75 credited by the custodian to the plan's account).

<sup>243</sup> PROPPACIF00000955-61 at PROPPACIF00000959.

<sup>244</sup> PROPPACIF00000955-61 at PROPPACIF00000959.

<sup>245</sup> See **Exhibit 17** for the calculation of other fees.



## Expert Report of Emre Carr, Ph.D., CFA

**Table 2: The Proper Pacific Plan 2014 Transactions Related to Chr. Hansen Stock Profit Calculations**

	Profit			
	<i>per share</i>		<i>aggregate</i>	
Stock Trade	DKK	2.10	DKK	1,762,950.00
Futures Trade	DKK	(4.80)	DKK	(4,029,600.00)
Dividend Credit by Custodian	DKK	2.75	DKK	2,310,387.95
Tax Reclaim	DKK	1.02	DKK	854,527.05
Gross Profit	<b>DKK</b>	<b>1.07</b>	<b>DKK</b>	<b>898,265.00</b>
Less Transaction Fees	DKK	(0.13)	DKK	(107,681.99)
Net Profit	<b>DKK</b>	<b>0.94</b>	<b>DKK</b>	<b>790,583.01</b>

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My work is ongoing and my opinions are subject to revision based on new information, which subsequently may be provided to or obtained by me.



Emre Carr, Ph.D., CFA

December 31, 2021

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